MEASUREMENT TECHNOLOGIES

# AMBIENT AIR AND METEOROLOGICAL MONITORING
# FOR
# TRUE GEOTHERMAL ENERGY COMPANY
# KILAUEA MIDDLE EAST RIFT ZONE, ISLAND OF HAWAII
# December 1990 DATA REPORT

Submitted to:

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**MEASUREMENT TECHNOLOGIES**

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## 1.0 Introduction

Measurement Technologies has been contracted by True Geothermal Energy Company to conduct an air quality and meteorological monitoring program to support incremental exploration and development of the Kilauea Middle East Rift Zone Geothermal Resources Subzone (GRS), Puna District, Island of Hawaii. The data gathered in the monitoring program is being used in support of the exploration and possible development of the geothermal resource.

The monitoring program consists of two (2) monitoring sites. The first site (Site 1) is located in the Kaohe Homesteads area and the second site (Site 2) is located at the geothermal drilling and staging area D-1. The monitored parameters for each site are contained in Table 1-1. The sites are being operated consistent with the guidelines and requirements as outlined in the following documents:

- "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," U.S. EPA-450/4-80-012, November 1980.
- "Quality Assurance Handbook for Air Pollution Measurement Systems: Volume IV. Meteorological Measurements," U.S. EPA-600/4-82-060, February 1983.
- "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II," Ambient Air Specific Methods, U.S. EPA-600/4-77-027a, May 1977.

As part of the monitoring program, Measurement will submit monthly and quarterly reports to True Geothermal Energy Company. The reports will contain the monitoring data, results of the quarterly quality assurance audits and results of quality control activities such as $SO_2$ and $H_2S$ gas analyzer precision checks, level 1 and 2 checks and multipoint calibration results.

TABLE 1-1 Monitored Parameters

| PARAMETER | SITE 1 | SITE 2 (MET) |
|---|---|---|
| HYDROGEN SULFIDE ($H_2S$) | X | 8 PLS |
| SULFUR DIOXIDE ($SO_2$) | X | X |
| WIND DIRECTION | X | X |
| WIND SPEED | X | X |
| VERTICAL WINDS | | X |
| SIGMA THETA | X | X |
| SIGMA W | | X |
| TEMPERATURE | X | |
| PRECIPITATION | X | |
| RAIN WATER (ANIONS & DISSOLVED METALS) | 3 PLS | |
| METALS (ATMOSPHERIC PARTICULATE | X | |
| TOTAL SUSPENDED PARTICULATE (TSP) | X | |
| INHALEABLE PARTICULATES (PM-10) | X | |
| RADON | | X |

Section 2.0 of this report contains an operations narrative of significant events and activities that occurred during the month of December. Section 3.0 of this report contains the data collected during the month with graphical presentations and data capture summaries. The data is presented by site numbers and may also be referred to by name. Site 1 and 2 names are Air Quality/Met and Met Site, respectively.

## 2.0 Operations Summary

This section discusses the operations of the two monitoring sites and any significant events that may affect data quality. A downtime summary is also provided.

### 2.1 Monthly Operations Summary

Site 1 and 2 operations were routine for the month of December. Results of the radon samples exposed for the December period indicated radon levels were below 0.2 pCi/l.

The rain water samples collected during December show insignificant levels of compounds and metals. The results of the analysis are contained in Section 3.0, Table 3-8 of this report.

The filter analyses for metals and particulate in November show insignificant concentrations and loadings for the compounds of interest in the program. The results are contained in Section 3.0, Tables 3-9 thru 3-15.

The continuous $H_2S$ analyzer at Site 1 detected no significant levels of $H_2S$ during December. Measured levels were below 8 parts per billion. The $H_2S$ dosimeter badges located at the Drill Site 2 measured low level concentrations of $H_2S$ during December. Levels of $H_2S$ were measured on December 14, 15, 16, and 17, 1990. $H_2S$ dosimeter badges are located at all of the major Cardinal directions around the Drill Site. The highest level of $H_2S$ (23 parts per billion) was measured on December 15th downwind of the Drill Site, on the badge located to the west. The second highest value (22.4 parts per billion) was measured on December 14th on the badge located to the west. The residential areas would not be impacted with winds out of the west to southwest.

The elevated levels were associated with flow testing of the steam wells located at the drill site. Testing of the wells occurred during the period December 14-18, 1990.

Higher than normal $SO_2$ levels were observed at Site 1 in December. Winds during periods where elevated levels of $SO_2$ were observed, were out of the northwest. Elevated levels occurred during the period December 22 through 31, 1990. The highest 1 hour $SO_2$ level occurred at 1100 hour on December 30, 1990.

It might be noted that wind direction data showing zero's as a value, may correlate with a wind speed of zero. The wind direction is a vector average and if the wind speed is zero the wind direction is not calculated. The winds are considered calm in these conditions and pollutants are in a stagnate condition, (not being transported).

## 2.2 Downtime Summary

This section presents the down time summary by site. Down time is considered any time an analyzer or sensor is not collecting valid data. Down time includes calibration time, data lost due to data validation criteria, audit time, time lost due to maintenance and malfunctions, etc.

All parameters at Site 1 had data capture rates above 92 percent in December. The wind parameters at this site recorded 57 hours of downtime during the period December 10 to 13, 1990, due to the wind speed sensor being damaged by the auditor on December 10th, during his attempt to audit the wind speed sensor. The wind speed sensors reed switch was damaged when the auditor was attaching the synchronous motor calibration device to the sensor. A new sensor was sent from Measurement Technologies for replacement. The sensor was replaced on December 10, 1990. Site 2 data capture in December was

excellent, with all parameters recording 100 percent data capture.

## 2.3 Major Activities

The fourth quarter quality assurance audit was conducted on December 10 and 11, 1990. All air quality analyzers and meteorological sensors at Sites 1 and 2 were audited, with the exception of the wind speed sensor and integrated sampler at Site 1. The wind speed sensor could not be audited due to the auditor accidentally damaging the sensor in his audit procedure. All sensors and analyzers were found to be operating well within audit tolerances. For detailed audit results, refer to the fourth quarter quality assurance audit report.

## 3.0 Data Summary

Section 3.0 contains monthly summary reports and statistic tables for all of the major monitored parameters. In addition, graphical wind rose plots, rain water analyses results, total suspended (TSP) and inhaleable (PM-10) particulate loading and metals analyses are also contained in this section. The data and associated graphical presentations are presented by site. Each site's data is organized and presented as follows:

- Monthly Summary Report containing the hourly values for each day of the month. Dashes contained in the place of any data signifies that the data falls into a down time category previously discussed in Section 2.0. An asterisk sign in the wind sigma theta signifies calm wind conditions.

- A graphical wind rose presentation will immediately follow the Monthly Summary Report. The wind rose displays a graphical presentation of the wind speed and direction at each site.

- Summary Statistic Tables containing the highest and second highest measured values, lowest value, arithmetic mean and standard deviation, data recovery rates and percentile breakdowns of measured values.

- TSP and PM-10 particulate data showing loading of each filter along with the elemental analyses of each metals filter (Site 1 only).

- Rain water analyses results showing each sample collected and the results of the metals elemental and anion analyses (Site 1 only).

## 3.1 Air Quality/Meteorological Monitoring Data Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM WD (DEG ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 341 | 339 | 331 | 320 | 312 | 314 | 310 | 315 | 322 | 336 | 341 | 344 | 348 | 351 | 349 | 352 | 337 | 335 | 2 | 322 | 315 | 309 | 299 | 310 |
| 2 | 319 | 309 | 297 | 307 | 293 | 324 | 296 | 300 | 317 | 336 | 345 | 341 | 353 | 353 | 11 | 22 | 347 | 332 | 313 | 297 | 295 | 287 | 292 | 292 |
| 3 | 306 | 295 | 292 | 286 | 282 | 294 | 294 | 293 | 329 | 333 | 340 | 349 | 3 | 355 | 0 | 358 | 351 | 347 | 333 | 321 | 323 | 321 | 320 | 321 |
| 4 | 322 | 323 | 308 | 285 | 305 | 306 | 300 | 293 | 317 | 324 | 334 | 344 | 351 | 352 | 348 | 351 | 349 | 343 | 339 | 340 | 325 | 325 | 324 | 329 |
| 5 | 326 | 322 | 320 | 318 | 326 | 321 | 326 | 323 | 331 | 337 | 343 | 345 | 349 | 346 | 348 | 345 | 337 | 326 | 329 | 326 | 319 | 316 | 308 | 313 |
| 6 | 293 | 275 | 270 | 0 | 264 | 293 | 0 | 0 | 322 | 343 | 353 | 345 | 353 | 10 | 35 | 21 | 356 | 349 | 0 | 0 | 0 | 0 | 248 | 0 |
| 7 | 0 | 270 | 245 | 248 | 235 | 250 | 260 | 236 | 322 | 341 | 1 | 53 | 19 | 356 | 355 | 355 | 351 | 349 | 349 | 0 | 353 | 345 | 0 | 338 |
| 8 | 324 | 329 | 311 | 321 | 314 | 313 | 322 | 321 | 312 | 325 | 329 | 344 | 347 | 350 | 353 | 346 | 338 | 343 | 348 | 343 | 348 | 346 | 344 | 338 |
| 9 | 349 | 31 | 354 | 348 | 345 | 349 | 353 | 64 | 14 | 358 | 351 | 5 | 352 | 20 | 22 | 89 | 0 | 26 | 23 | 7 | 53 | 39 | 15 | 356 |
| 10 | 352 | 351 | 343 | 347 | 335 | 337 | 324 | 327 | 333 | 343 | 348 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 11 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 12 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 337 | 9 | 9 | 43 | 98 |
| 13 | 0 | 118 | 53 | 76 | 85 | 96 | 101 | 20 | 0 | 41 | 358 | 9 | 4 | 26 | 3 | 11 | 357 | 346 | 331 | 323 | 337 | 331 | 358 | 358 |
| 14 | 344 | 334 | 330 | 328 | 341 | 333 | 330 | 112 | 120 | 78 | 50 | 33 | 70 | 39 | 22 | 120 | 121 | 108 | 69 | 124 | 282 | 274 | 288 | 308 |
| 15 | 299 | 283 | 298 | 289 | 280 | 320 | 291 | 265 | 291 | 319 | 339 | 5 | 91 | 32 | 334 | 316 | 127 | 194 | 215 | 224 | 218 | 262 | 257 | 229 |
| 16 | 242 | 271 | 21 | 178 | 149 | 123 | 269 | 332 | 35 | 183 | 131 | 117 | 115 | 120 | 125 | 122 | 126 | 134 | 130 | 138 | 145 | 143 | 123 | 134 |
| 17 | 116 | 131 | 123 | 124 | 199 | 167 | 119 | 67 | 115 | 151 | 129 | 125 | 123 | 124 | 121 | 130 | 111 | 50 | 118 | 126 | 319 | 298 | 292 | 246 |
| 18 | 257 | 294 | 290 | 291 | 307 | 305 | 315 | 312 | 322 | 327 | 335 | 345 | 351 | 1 | 348 | 345 | 355 | 351 | 338 | 317 | 311 | 294 | 299 | 308 |
| 19 | 314 | 317 | 315 | 306 | 319 | 315 | 309 | 296 | 326 | 325 | 336 | 329 | 325 | 335 | 347 | 338 | 335 | 345 | 345 | 335 | 329 | 331 | 328 | 323 |
| 20 | 325 | 315 | 312 | 307 | 304 | 300 | ---- | 311 | 310 | 307 | 306 | 323 | 341 | 344 | 351 | 324 | 321 | 331 | 312 | 306 | 314 | 321 | 324 | 313 |
| 21 | 292 | 283 | 274 | 288 | 282 | 270 | 212 | 252 | 264 | 124 | 157 | 124 | 120 | 127 | 122 | 122 | 332 | 339 | 257 | 269 | 306 | 158 | 129 | 123 |
| 22 | 133 | 242 | 201 | 292 | 341 | 317 | 317 | ---- | 305 | 306 | 130 | 143 | 131 | 130 | 163 | 169 | 181 | 139 | 161 | 156 | 103 | 157 | 209 | 234 |
| 23 | 194 | 124 | 223 | 161 | 203 | 172 | 203 | 200 | 187 | 179 | 190 | 184 | 186 | 178 | 164 | 165 | 172 | 179 | 178 | 171 | 195 | 232 | 309 | 316 |
| 24 | 295 | 297 | 311 | 220 | 196 | 123 | 123 | 148 | 175 | 160 | 129 | 124 | 126 | 128 | 136 | 171 | 187 | 186 | 175 | 177 | 187 | 198 | 201 | 197 |
| 25 | 203 | 178 | 309 | 297 | 304 | 188 | 187 | 207 | 295 | 328 | 345 | 339 | 188 | 179 | 190 | 189 | 197 | 262 | 180 | 227 | 264 | 273 | 229 | 231 |
| 26 | 236 | 208 | 180 | 185 | 218 | 225 | 181 | 180 | 175 | 210 | 165 | 159 | 159 | 183 | 194 | 338 | 337 | 196 | 267 | 270 | 239 | 241 | 223 | 205 |
| 27 | 228 | 228 | 218 | 230 | 223 | 204 | 201 | 203 | 205 | 124 | 121 | 119 | 134 | 173 | 177 | 196 | 197 | 201 | 185 | 218 | 326 | 302 | 266 | 189 |
| 28 | 226 | 272 | 261 | 214 | 228 | 232 | 227 | 268 | 317 | 337 | 347 | 349 | 12 | 32 | 13 | 1 | 359 | 330 | 219 | 219 | 200 | 202 | 209 | 206 |
| 29 | 203 | 212 | 224 | 208 | 197 | 238 | 230 | 323 | 336 | 342 | 349 | 354 | 352 | 349 | 351 | 350 | 350 | 338 | 344 | 336 | 320 | 321 | 314 | 315 |
| 30 | 313 | 306 | 302 | 291 | 295 | 286 | 285 | 277 | 321 | 335 | 346 | 344 | 356 | 359 | 19 | 351 | 344 | 327 | 263 | 235 | 223 | 208 | 214 | 218 |
| 31 | 221 | 218 | 216 | 198 | 282 | 213 | 210 | 286 | 322 | 341 | 338 | 347 | 344 | 344 | 342 | 340 | 338 | 340 | 336 | 331 | 329 | 335 | 332 | 336 |

Table 3-1. Wind Direction Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM WS (MPH ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.8 | 3.4 | 3.3 | 3.5 | 2.5 | 1.4 | 2.6 | 4.0 | 4.2 | 5.3 | 6.4 | 6.2 | 4.7 | 4.3 | 4.0 | 4.9 | 5.5 | 4.4 | 0.1 | 1.7 | 1.4 | 0.5 | 0.3 | 0.8 |
| 2 | 0.3 | 0.4 | 0.4 | 0.9 | 0.3 | 1.2 | 0.6 | 1.3 | 2.1 | 1.6 | 1.3 | 0.4 | 2.5 | 1.6 | 1.1 | 0.7 | 1.0 | 0.8 | 1.3 | 0.8 | 1.1 | 0.3 | 0.5 | 0.4 |
| 3 | 1.5 | 0.4 | 0.4 | 0.3 | 0.4 | 0.5 | 0.8 | 0.3 | 2.4 | 4.4 | 4.3 | 3.2 | 2.7 | 3.6 | 3.0 | 2.6 | 2.9 | 3.7 | 3.7 | 4.5 | 4.2 | 4.0 | 4.2 | 4.1 |
| 4 | 3.5 | 4.8 | 2.0 | 0.5 | 0.6 | 1.9 | 1.6 | 0.6 | 3.6 | 5.0 | 6.4 | 5.6 | 5.2 | 4.5 | 6.1 | 6.6 | 6.1 | 5.4 | 5.2 | 3.9 | 4.3 | 4.7 | 4.6 | 5.1 |
| 5 | 5.1 | 4.5 | 4.6 | 4.5 | 5.0 | 5.2 | 5.6 | 4.3 | 7.0 | 7.2 | 7.2 | 6.5 | 6.2 | 7.6 | 6.2 | 6.9 | 6.8 | 5.8 | 4.9 | 5.3 | 5.1 | 2.5 | 0.5 | 1.1 |
| 6 | 0.4 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 1.3 | 1.5 | 2.4 | 3.8 | 1.9 | 2.1 | 1.1 | 1.6 | 2.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 1.8 | 0.7 | 0.8 | 1.8 | 3.1 | 3.0 | 3.3 | 2.7 | 1.6 | 0.9 | 0.2 | 0.3 | 0.6 | 0.0 | 0.9 |
| 8 | 0.3 | 0.1 | 0.3 | 1.8 | 1.7 | 0.8 | 0.5 | 4.2 | 2.7 | 3.7 | 6.1 | 6.0 | 5.6 | 5.1 | 4.3 | 7.4 | 6.6 | 5.9 | 5.9 | 5.7 | 5.8 | 6.3 | 6.4 | 5.1 |
| 9 | 3.6 | 1.1 | 2.0 | 1.9 | 5.5 | 5.1 | 3.2 | 1.6 | 1.5 | 3.0 | 3.3 | 3.3 | 3.4 | 2.0 | 2.1 | 1.3 | 2.1 | 1.4 | 1.2 | 2.2 | 0.9 | 1.1 | 1.6 | 1.6 |
| 10 | 1.9 | 2.4 | 3.8 | 5.0 | 5.4 | 4.8 | 3.4 | 3.9 | 5.4 | 5.0 | 4.7 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 11 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 12 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 3.8 | 1.5 | 1.4 | 1.4 | 1.4 |
| 13 | 1.1 | 2.4 | 1.0 | 0.7 | 0.9 | 1.0 | 1.1 | 0.6 | 1.3 | 0.9 | 1.9 | 2.1 | 2.6 | 2.0 | 2.6 | 2.1 | 2.6 | 2.2 | 2.9 | 3.6 | 2.4 | 2.7 | 1.6 | 2.2 |
| 14 | 3.0 | 4.1 | 4.1 | 5.5 | 4.3 | 2.4 | 1.5 | 1.1 | 1.4 | 1.2 | 0.7 | 1.0 | 1.0 | 0.9 | 0.9 | 1.4 | 1.2 | 0.3 | 0.4 | 1.3 | 0.5 | 0.5 | 1.5 | 3.4 |
| 15 | 2.2 | 1.5 | 1.8 | 1.7 | 1.2 | 2.5 | 1.8 | 0.9 | 0.9 | 4.1 | 3.3 | 2.1 | 1.1 | 1.0 | 1.5 | 1.1 | 0.8 | 0.6 | 0.1 | 0.3 | 0.7 | 0.5 | 0.7 | 0.3 |
| 16 | 0.5 | 0.6 | 0.6 | 0.3 | 1.1 | 0.8 | 0.9 | 1.6 | 0.3 | 0.7 | 2.1 | 1.7 | 2.0 | 2.3 | 2.6 | 3.0 | 2.5 | 1.5 | 1.3 | 0.9 | 0.3 | 1.2 | 1.3 | 1.7 |
| 17 | 0.8 | 0.3 | 1.0 | 0.8 | 0.2 | 0.5 | 0.8 | 0.2 | 0.3 | 1.1 | 1.7 | 2.9 | 3.4 | 2.6 | 2.1 | 1.8 | 0.7 | 0.3 | 0.6 | 0.7 | 1.7 | 1.5 | 0.9 | 0.1 |
| 18 | 0.7 | 1.3 | 1.3 | 0.3 | 1.8 | 1.7 | 3.4 | 3.3 | 4.7 | 4.8 | 5.0 | 4.7 | 4.5 | 1.8 | 5.2 | 6.9 | 4.5 | 5.8 | 8.6 | 8.4 | 5.5 | 1.9 | 3.1 | 4.4 |
| 19 | 5.6 | 5.6 | 5.2 | 3.8 | 3.8 | 4.8 | 3.8 | 1.7 | 4.8 | 6.5 | 6.8 | 6.0 | 7.4 | 6.9 | 4.7 | 7.3 | 10.2 | 6.4 | 7.9 | 7.7 | 7.7 | 7.0 | 6.0 | 5.8 |
| 20 | 4.3 | 4.6 | 4.0 | 3.4 | 2.5 | 2.3 | ---- | 3.2 | 3.4 | 2.3 | 2.8 | 3.3 | 3.7 | 3.5 | 3.0 | 2.1 | 3.3 | 2.4 | 3.6 | 3.4 | 3.5 | 3.1 | 3.6 | 2.5 |
| 21 | 1.9 | 0.9 | 1.0 | 1.0 | 1.2 | 1.0 | 0.6 | 0.3 | 0.7 | 0.2 | 0.9 | 1.2 | 1.9 | 2.3 | 1.5 | 0.9 | 0.4 | 0.9 | 0.6 | 0.2 | 2.1 | 0.3 | 1.6 | 2.4 |
| 22 | 0.9 | 0.7 | 0.5 | 1.2 | 1.6 | 2.8 | 0.6 | ---- | 0.6 | 1.1 | 0.7 | 1.4 | 1.8 | 1.6 | 1.5 | 1.5 | 1.9 | 1.4 | 1.1 | 1.0 | 0.3 | 0.7 | 0.2 | 0.1 |
| 23 | 0.5 | 0.1 | 0.1 | 0.1 | 0.6 | 0.6 | 2.1 | 2.3 | 2.4 | 2.0 | 3.3 | 3.4 | 2.9 | 3.0 | 2.3 | 1.7 | 1.7 | 1.2 | 1.9 | 0.7 | 0.6 | 0.4 | 1.3 | 1.7 |
| 24 | 0.5 | 0.8 | 0.8 | 0.3 | 0.4 | 2.6 | 2.4 | 1.6 | 2.8 | 3.2 | 2.6 | 3.1 | 2.2 | 1.9 | 1.1 | 2.8 | 2.4 | 3.1 | 3.3 | 2.5 | 3.0 | 2.1 | 1.5 | 0.4 |
| 25 | 0.8 | 0.4 | 1.2 | 1.3 | 1.4 | 0.9 | 1.2 | 0.2 | 0.4 | 2.0 | 4.3 | 1.5 | 2.6 | 3.2 | 3.1 | 2.5 | 1.9 | 0.8 | 0.4 | 0.8 | 1.0 | 1.0 | 1.3 | 1.4 |
| 26 | 1.2 | 0.7 | 2.4 | 1.2 | 0.7 | 0.4 | 0.7 | 0.7 | 0.5 | 0.7 | 2.9 | 2.9 | 3.1 | 3.3 | 1.8 | 3.6 | 1.3 | 0.3 | 0.6 | 0.9 | 0.7 | 1.0 | 0.7 | 0.6 |
| 27 | 1.2 | 1.1 | 0.8 | 1.0 | 0.9 | 0.7 | 1.2 | 0.9 | 0.4 | 1.3 | 1.9 | 2.7 | 3.0 | 2.2 | 2.9 | 1.8 | 1.3 | 1.1 | 1.0 | 0.4 | 0.6 | 1.4 | 0.8 | 0.8 |
| 28 | 0.4 | 1.3 | 1.1 | 0.8 | 1.0 | 0.9 | 0.9 | 1.0 | 2.8 | 4.0 | 4.5 | 2.8 | 1.9 | 1.4 | 1.8 | 1.1 | 1.5 | 0.8 | 0.0 | 0.5 | 0.8 | 1.0 | 0.5 | 0.6 |
| 29 | 0.2 | 0.1 | 0.3 | 0.5 | 0.5 | 0.3 | 0.6 | 1.2 | 4.0 | 6.2 | 5.9 | 4.9 | 5.1 | 6.5 | 5.8 | 5.6 | 4.9 | 4.0 | 4.8 | 4.4 | 4.1 | 4.8 | 4.6 | 4.5 |
| 30 | 3.7 | 2.8 | 2.7 | 2.4 | 2.1 | 1.5 | 1.5 | 1.2 | 2.1 | 4.5 | 3.1 | 2.5 | 3.1 | 2.8 | 0.9 | 2.2 | 3.0 | 1.7 | 0.3 | 0.3 | 0.7 | 1.1 | 0.8 | 0.9 |
| 31 | 1.0 | 1.4 | 0.6 | 0.5 | 1.3 | 0.8 | 0.3 | 0.8 | 4.1 | 7.9 | 8.3 | 8.5 | 7.9 | 8.5 | 9.3 | 9.2 | 9.2 | 9.2 | 8.4 | 7.6 | 8.9 | 9.3 | 8.5 | 10.2 |

Table 3-2. Wind Speed Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM Sigθ1 (deg ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.9 | 19.4 | 17.1 | 16.4 | 19.4 | 38.0 | 24.9 | 21.9 | 19.1 | 18.6 | 22.1 | 26.0 | 40.6 | 51.2 | 40.6 | 35.3 | 18.6 | 20.3 | 67.5 | 24.8 | 72.9 | 71.8 | 34.2 | 47.2 |
| 2 | 86.8 | 46.8 | 50.3 | 49.2 | 86.0 | 71.4 | 43.4 | 41.8 | 27.6 | 31.8 | 64.9 | 63.3 | 44.0 | 53.9 | 76.8 | 68.4 | 63.7 | 32.3 | 20.1 | 29.6 | 25.4 | 39.7 | 24.0 | 38.8 |
| 3 | 21.0 | 36.6 | 66.6 | 31.5 | 37.7 | 44.1 | 29.2 | 43.7 | 50.9 | 18.6 | 21.5 | 52.8 | 62.7 | 57.2 | 61.8 | 62.1 | 47.3 | 23.4 | 20.1 | 17.9 | 19.4 | 16.3 | 15.0 | 16.9 |
| 4 | 17.0 | 15.5 | 22.1 | 29.1 | 41.6 | 22.0 | 27.8 | 42.4 | 36.4 | 24.7 | 20.7 | 29.3 | 41.7 | 47.7 | 32.4 | 29.5 | 24.1 | 19.1 | 18.2 | 18.6 | 15.2 | 15.7 | 16.0 | 16.4 |
| 5 | 15.7 | 14.7 | 15.5 | 16.0 | 16.3 | 15.3 | 16.5 | 19.1 | 18.3 | 20.5 | 24.7 | 29.0 | 34.2 | 27.4 | 27.6 | 22.3 | 19.1 | 16.5 | 18.6 | 17.6 | 19.3 | 25.3 | 35.5 | 31.2 |
| 6 | 49.6 | 100.6 | 79.1 | 97.6 | 85.5 | 93.5 | 97.6 | 97.6 | 38.4 | 49.4 | 53.9 | 33.5 | 66.8 | 69.0 | 76.8 | 68.6 | 48.2 | 38.5 | 115.4 | 97.6 | 97.6 | 97.6 | 100.6 | 121.2 |
| 7 | 97.6 | 102.5 | 119.7 | 106.5 | 96.8 | 70.4 | 97.6 | 85.6 | 59.1 | 47.4 | 78.0 | 76.7 | 70.3 | 58.4 | 51.7 | 52.2 | 50.5 | 39.9 | 42.1 | 61.5 | 48.8 | 50.4 | 45.4 | 65.2 |
| 8 | 65.1 | 78.5 | 53.6 | 27.9 | 20.9 | 62.7 | 86.3 | 25.3 | 27.3 | 21.2 | 18.2 | 24.1 | 29.7 | 34.0 | 46.1 | 25.4 | 19.2 | 24.0 | 24.2 | 21.4 | 22.6 | 26.0 | 22.7 | 39.7 |
| 9 | 46.3 | 78.7 | 48.2 | 39.9 | 31.7 | 37.3 | 60.5 | 84.9 | 86.1 | 68.0 | 57.2 | 70.2 | 56.9 | 75.7 | 76.4 | 80.7 | 63.7 | 79.0 | 82.8 | 64.8 | 85.2 | 83.0 | 70.4 | 68.2 |
| 10 | 57.6 | 56.4 | 32.3 | 30.8 | 18.6 | 21.6 | 25.3 | 23.0 | 20.8 | 29.6 | 52.0 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 11 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- |
| 12 | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | ---- | 34.7 | 65.4 | 69.5 | 74.7 | 79.6 |
| 13 | 69.2 | 67.1 | 67.3 | 72.1 | 75.1 | 74.7 | 68.6 | 74.1 | 72.4 | 77.5 | 68.1 | 74.3 | 70.8 | 70.8 | 70.6 | 71.4 | 57.3 | 48.5 | 27.1 | 18.0 | 54.9 | 25.4 | 63.8 | 67.3 |
| 14 | 29.0 | 25.7 | 19.3 | 19.3 | 42.8 | 44.4 | 65.7 | 78.9 | 77.8 | 81.6 | 84.6 | 82.3 | 89.6 | 86.1 | 83.1 | 73.7 | 71.5 | 96.5 | 90.2 | 73.0 | 47.8 | 33.6 | 43.9 | 20.8 |
| 15 | 32.2 | 40.4 | 44.9 | 34.8 | 33.5 | 52.5 | 30.9 | 48.8 | 52.5 | 21.4 | 45.5 | 61.8 | 69.0 | 63.0 | 52.3 | 46.0 | 62.0 | 58.8 | 19.7 | 23.2 | 44.8 | 50.7 | 65.3 | 60.4 |
| 16 | 81.9 | 71.0 | 67.4 | 56.1 | 68.7 | 64.0 | 61.6 | 56.0 | 78.4 | 81.8 | 64.3 | 55.5 | 62.2 | 59.9 | 50.3 | 38.8 | 41.2 | 39.1 | 42.1 | 39.7 | 74.1 | 41.0 | 50.3 | 36.6 |
| 17 | 65.1 | 76.7 | 58.2 | 58.0 | 88.0 | 82.2 | 64.8 | 87.6 | 84.4 | 48.7 | 58.7 | 49.3 | 48.8 | 44.4 | 59.8 | 55.3 | 76.7 | 82.0 | 69.0 | 60.8 | 24.9 | 54.9 | 46.6 | 81.9 |
| 18 | 40.7 | 33.3 | 27.3 | 31.5 | 29.0 | 58.4 | 21.8 | 24.6 | 17.9 | 16.9 | 17.6 | 21.4 | 35.8 | 66.8 | 30.0 | 28.1 | 61.8 | 45.9 | 23.6 | 19.4 | 27.0 | 60.9 | 23.5 | 19.4 |
| 19 | 16.0 | 14.6 | 15.8 | 22.9 | 20.5 | 18.1 | 22.9 | 37.5 | 26.8 | 21.4 | 23.0 | 20.9 | 21.4 | 21.2 | 32.3 | 21.6 | 18.3 | 28.2 | 24.8 | 18.2 | 16.6 | 16.8 | 17.7 | 17.4 |
| 20 | 18.2 | 19.4 | 20.3 | 26.4 | 33.6 | 35.0 | ---- | 35.6 | 31.2 | 31.9 | 35.2 | 28.7 | 31.3 | 36.3 | 53.3 | 40.8 | 24.5 | 48.1 | 22.9 | 22.5 | 19.1 | 49.3 | 25.2 | 58.8 |
| 21 | 39.4 | 56.7 | 53.2 | 47.9 | 36.7 | 50.0 | 68.8 | 79.6 | 52.2 | 71.5 | 57.7 | 77.6 | 65.5 | 61.0 | 63.5 | 64.2 | 36.6 | 54.3 | 49.0 | 66.4 | 34.5 | 71.0 | 60.9 | 66.3 |
| 22 | 81.1 | 74.7 | 69.6 | 62.0 | 62.1 | 33.6 | 72.8 | ---- | 78.6 | 52.5 | 54.0 | 57.8 | 53.8 | 63.3 | 69.1 | 74.3 | 73.8 | 66.6 | 83.5 | 74.6 | 54.6 | 70.5 | 52.5 | 55.6 |
| 23 | 69.5 | 99.9 | 63.3 | 98.7 | 71.6 | 72.6 | 61.2 | 68.7 | 67.0 | 82.8 | 64.2 | 66.1 | 70.3 | 65.8 | 76.4 | 77.3 | 76.5 | 82.9 | 68.7 | 80.0 | 86.2 | 60.9 | 76.9 | 55.8 |
| 24 | 55.0 | 49.8 | 51.4 | 57.6 | 72.7 | 45.8 | 56.8 | 74.3 | 64.3 | 71.4 | 73.5 | 66.6 | 79.3 | 78.9 | 89.3 | 74.6 | 82.2 | 73.1 | 66.5 | 76.4 | 71.5 | 82.9 | 81.7 | 80.2 |
| 25 | 72.7 | 86.3 | 57.2 | 56.6 | 61.0 | 49.1 | 22.2 | 46.3 | 68.1 | 50.9 | 27.6 | 68.4 | 67.0 | 64.4 | 68.3 | 76.5 | 78.7 | 75.4 | 37.6 | 64.7 | 64.7 | 51.7 | 75.9 | 76.0 |
| 26 | 73.6 | 35.6 | 16.7 | 29.3 | 49.2 | 51.7 | 56.8 | 52.2 | 62.3 | 84.0 | 63.9 | 63.9 | 66.0 | 68.8 | 71.1 | 27.8 | 46.5 | 65.4 | 39.1 | 27.4 | 22.2 | 44.5 | 54.5 | 41.9 |
| 27 | 18.1 | 27.1 | 37.8 | 34.3 | 35.8 | 43.8 | 27.3 | 22.8 | 57.3 | 65.6 | 57.7 | 54.4 | 49.1 | 64.0 | 68.9 | 75.5 | 78.5 | 75.3 | 51.9 | 91.6 | 66.9 | 28.7 | 62.8 | 32.8 |
| 28 | 18.4 | 43.5 | 54.2 | 52.5 | 41.9 | 38.8 | 65.3 | 57.7 | 31.1 | 28.2 | 37.0 | 52.4 | 67.1 | 78.4 | 63.2 | 71.5 | 62.9 | 58.7 | 70.6 | 72.5 | 23.6 | 14.1 | 18.3 | 25.9 |
| 29 | 28.7 | 15.9 | 17.9 | 23.9 | 38.2 | 58.2 | 28.4 | 49.1 | 28.7 | 23.2 | 32.1 | 43.6 | 34.9 | 29.4 | 34.4 | 28.8 | 26.7 | 18.3 | 18.8 | 19.4 | 17.2 | 14.5 | 17.5 | 16.7 |
| 30 | 17.4 | 28.1 | 25.0 | 26.1 | 31.7 | 32.3 | 28.4 | 52.2 | 49.7 | 26.8 | 43.8 | 58.2 | 49.8 | 49.8 | 81.9 | 40.3 | 25.0 | 18.6 | 44.6 | 20.8 | 28.7 | 20.2 | 14.2 | 10.2 |
| 31 | 16.8 | 23.8 | 38.8 | 56.6 | 38.3 | 35.8 | 21.2 | 34.5 | 21.6 | 21.8 | 23.3 | 27.3 | 27.6 | 24.9 | 24.5 | 22.3 | 21.8 | 20.0 | 18.9 | 16.2 | 17.0 | 18.0 | 16.8 | 19.2 |

Table 3-3. Sigma Theta Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TEMP (DEG F) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 68.0 | 67.6 | 66.6 | 66.1 | 65.8 | 66.0 | 65.0 | 64.5 | 66.9 | 71.2 | 72.3 | 73.0 | 74.5 | 75.5 | 75.0 | 71.0 | 69.4 | 68.5 | 66.8 | 66.9 | 66.9 | 66.7 | 66.7 | 67.4 |
| 2 | 67.2 | 66.9 | 66.8 | 66.7 | 66.5 | 66.3 | 65.3 | 67.1 | 70.2 | 72.1 | 71.2 | 69.8 | 70.7 | 73.0 | 75.3 | 74.1 | 73.2 | 68.2 | 66.7 | 66.0 | 65.2 | 64.8 | 64.3 | 64.5 |
| 3 | 65.3 | 64.3 | 64.6 | 63.9 | 62.9 | 63.4 | 63.3 | 63.6 | 67.6 | 69.5 | 70.6 | 74.8 | 75.9 | 75.9 | 75.1 | 75.1 | 71.7 | 69.1 | 66.8 | 65.8 | 66.0 | 65.4 | 65.6 | 65.3 |
| 4 | 65.1 | 65.1 | 64.1 | 63.1 | 63.4 | 64.0 | 63.0 | 64.0 | 67.6 | 69.7 | 71.6 | 73.2 | 73.6 | 73.8 | 73.0 | 72.7 | 70.3 | 69.0 | 68.0 | 67.0 | 66.5 | 66.1 | 66.2 | 66.3 |
| 5 | 65.9 | 65.6 | 65.2 | 64.7 | 64.8 | 64.7 | 64.7 | 65.8 | 69.3 | 72.1 | 73.5 | 74.5 | 75.1 | 74.3 | 70.9 | 69.7 | 67.9 | 67.4 | 66.2 | 66.1 | 66.0 | 65.7 | 65.8 | 65.7 |
| 6 | 65.3 | 65.1 | 64.6 | 63.9 | 64.0 | 64.2 | 63.4 | 70.3 | 75.7 | 75.4 | 76.3 | 74.8 | 77.3 | 77.2 | 76.8 | 77.1 | 72.8 | 69.8 | 68.4 | 66.7 | 65.9 | 65.8 | 65.7 | 65.8 |
| 7 | 65.2 | 64.5 | 64.2 | 63.8 | 63.9 | 64.1 | 64.1 | 70.3 | 78.8 | 76.8 | 78.6 | 79.3 | 78.1 | 78.3 | 76.4 | 73.8 | 71.5 | 69.8 | 68.8 | 68.1 | 68.3 | 68.3 | 68.1 | 67.9 |
| 8 | 67.4 | 67.0 | 66.7 | 67.0 | 66.9 | 66.8 | 66.4 | 66.0 | 68.1 | 68.3 | 70.6 | 71.2 | 71.6 | 73.3 | 73.7 | 70.8 | 68.7 | 67.6 | 67.7 | 67.1 | 67.2 | 67.6 | 67.1 | 66.7 |
| 9 | 67.6 | 66.9 | 66.4 | 66.4 | 66.6 | 66.9 | 67.1 | 65.9 | 66.5 | 67.8 | 68.7 | 67.8 | 67.6 | 69.3 | 68.8 | 67.3 | 67.6 | 67.1 | 67.1 | 66.6 | 66.2 | 66.5 | 66.4 | 66.2 |
| 10 | 66.0 | 65.8 | 65.7 | 65.3 | 64.0 | 63.3 | 62.7 | 64.1 | 66.7 | 67.6 | 71.7 | ---- | ---- | 70.6 | 71.9 | 71.0 | 69.6 | 65.8 | 65.1 | 65.1 | 64.5 | 63.5 | 63.1 | 64.6 |
| 11 | 63.6 | 63.8 | 63.0 | 63.3 | 62.2 | 62.3 | 62.2 | 63.5 | 69.0 | 68.8 | 69.6 | 69.9 | 71.2 | 71.4 | 69.6 | 70.5 | 69.3 | 66.7 | 66.2 | 65.7 | 65.2 | 63.9 | 63.5 | 63.2 |
| 12 | 62.6 | 62.9 | 62.8 | 62.8 | 62.8 | 62.8 | 62.8 | 63.2 | 65.9 | 67.3 | 68.7 | 68.9 | 69.8 | 66.8 | 66.4 | 65.6 | 65.5 | 64.6 | 64.9 | 64.9 | 65.0 | 64.8 | 64.9 | 64.5 |
| 13 | 64.4 | 64.4 | 64.3 | 64.9 | 65.2 | 65.3 | 65.2 | 65.5 | 65.8 | 68.1 | 68.4 | 70.7 | 71.2 | 71.4 | 70.5 | 69.1 | 68.3 | 66.2 | 64.4 | 63.9 | 64.2 | 64.3 | 64.1 | 64.2 |
| 14 | 63.8 | 63.1 | 62.8 | 62.4 | 62.6 | 63.4 | 63.3 | 64.3 | 64.9 | 65.8 | 66.9 | 67.5 | 69.2 | 68.7 | 67.7 | 67.5 | 66.5 | 65.5 | 64.5 | 63.8 | 62.7 | 62.4 | 62.9 | 62.7 |
| 15 | 62.3 | 62.3 | 62.7 | 62.4 | 62.3 | 63.2 | 62.2 | 62.8 | 67.6 | 70.0 | 72.1 | 72.5 | 72.3 | 72.4 | 67.6 | 69.3 | 67.4 | 65.9 | 63.7 | 62.7 | 63.1 | 63.5 | 63.7 | 64.1 |
| 16 | 64.4 | 64.4 | 65.0 | 64.9 | 65.6 | 65.2 | 65.0 | 65.0 | 65.4 | 66.1 | 66.7 | 67.3 | 70.9 | 70.1 | 70.3 | 69.6 | 69.0 | 68.0 | 67.6 | 67.3 | 67.3 | 67.4 | 67.6 | 67.6 |
| 17 | 67.6 | 67.6 | 67.6 | 67.5 | 67.5 | 67.6 | 67.8 | 68.3 | 69.3 | 70.5 | 70.5 | 71.5 | 70.4 | 69.9 | 69.1 | 68.5 | 68.6 | 67.6 | 67.6 | 67.5 | 67.2 | 66.9 | 66.3 | 65.5 |
| 18 | 65.4 | 65.1 | 65.6 | 65.3 | 65.4 | 65.3 | 65.5 | 65.7 | 67.9 | 69.1 | 70.3 | 71.8 | 71.7 | 68.9 | 67.3 | 66.0 | 63.1 | 63.2 | 62.7 | 61.3 | 61.7 | 61.5 | 62.3 | 62.5 |
| 19 | 62.6 | 62.7 | 63.0 | 62.2 | 62.4 | 62.7 | 62.9 | 63.4 | 65.8 | 65.5 | 66.4 | 66.0 | 65.6 | 65.4 | 65.5 | 64.5 | 65.1 | 63.2 | 63.4 | 62.7 | 63.0 | 62.4 | 61.3 | 61.5 |
| 20 | 61.6 | 61.3 | 61.5 | 61.2 | 62.2 | 62.3 | ---- | 62.4 | 63.4 | 64.4 | 66.7 | 70.5 | 72.0 | 72.3 | 70.2 | 68.0 | 67.6 | 66.1 | 65.2 | 65.4 | 66.0 | 66.4 | 65.9 | 65.7 |
| 21 | 65.2 | 64.8 | 64.9 | 65.4 | 65.5 | 65.9 | 65.7 | 65.4 | 66.0 | 68.1 | 68.5 | 67.4 | 69.1 | 69.3 | 70.1 | 69.4 | 69.0 | 68.4 | 67.4 | 67.5 | 67.0 | 67.1 | 68.5 | 67.9 |
| 22 | 67.7 | 66.9 | 66.0 | 65.1 | 65.4 | 65.3 | 65.4 | ---- | 65.6 | 67.9 | 68.6 | 68.0 | 69.3 | 69.0 | 68.5 | 69.0 | 67.7 | 66.9 | 66.8 | 66.8 | 66.2 | 65.3 | 64.6 | 64.4 |
| 23 | 66.3 | 66.5 | 66.7 | 67.3 | 66.9 | 66.9 | 66.6 | 67.7 | 69.6 | 69.5 | 70.4 | 71.2 | 70.8 | 70.4 | 70.4 | 69.8 | 68.9 | 69.0 | 68.5 | 67.7 | 68.7 | 68.7 | 67.0 | 65.3 |
| 24 | 65.4 | 65.7 | 65.5 | 65.7 | 65.8 | 65.9 | 66.7 | 67.8 | 67.7 | 67.8 | 68.4 | 68.3 | 68.2 | 68.2 | 68.5 | 69.3 | 69.2 | 69.3 | 69.2 | 69.2 | 69.4 | 69.4 | 68.8 | 68.2 |
| 25 | 68.5 | 67.9 | 66.7 | 65.7 | 65.7 | 64.7 | 63.5 | 64.6 | 76.6 | 74.8 | 75.1 | 76.7 | 78.4 | 78.1 | 78.0 | 79.5 | 76.3 | 69.5 | 65.0 | 63.8 | 64.5 | 61.6 | 64.0 | 64.8 |
| 26 | 64.7 | 62.7 | 63.4 | 63.5 | 63.8 | 62.7 | 62.7 | 63.6 | 71.0 | 76.4 | 76.9 | 76.1 | 76.1 | 76.5 | 77.5 | 74.1 | 71.8 | 67.6 | 64.5 | 63.9 | 62.7 | 62.9 | 62.4 | 61.8 |
| 27 | 61.9 | 62.0 | 61.3 | 61.3 | 60.3 | 59.7 | 60.3 | 63.2 | 76.8 | 73.2 | 70.9 | 73.0 | 75.7 | 74.5 | 76.0 | 72.2 | 71.0 | 69.9 | 68.7 | 67.6 | 67.1 | 66.1 | 64.0 | 63.2 |
| 28 | 61.6 | 61.6 | 61.5 | 61.2 | 61.2 | 60.6 | 60.8 | 65.0 | 74.6 | 74.0 | 75.3 | 75.1 | 76.5 | 75.9 | 73.7 | 73.1 | 72.9 | 68.5 | 64.8 | 64.0 | 64.3 | 64.0 | 63.2 | 62.7 |
| 29 | 62.2 | 62.2 | 62.4 | 62.1 | 62.5 | 62.3 | 61.0 | 62.7 | 70.0 | 69.9 | 71.6 | 72.5 | 69.6 | 69.4 | 68.4 | 67.7 | 66.7 | 65.6 | 64.8 | 64.4 | 63.0 | 62.4 | 61.8 | 61.7 |
| 30 | 61.2 | 60.8 | 60.3 | 60.1 | 60.5 | 60.4 | 60.0 | 60.7 | 69.3 | 69.9 | 71.5 | 73.0 | 72.1 | 70.8 | 70.8 | 68.8 | 67.6 | 65.6 | 64.0 | 62.4 | 61.4 | 61.0 | 60.3 | 59.5 |
| 31 | 59.3 | 60.1 | 58.7 | 58.1 | 58.8 | 59.2 | 58.4 | 60.4 | 67.1 | 68.5 | 69.2 | 70.3 | 71.6 | 72.1 | 70.9 | 70.5 | 67.6 | 65.3 | 63.4 | 62.0 | 61.8 | 62.0 | 61.3 | 61.5 |

Table 3-4. Ambient Temperature Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM RAIN (INCH ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.02 | 0.01 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.08 | 0.00 | 0.14 | 0.01 | 0.01 | 0.00 |
| 2 | 0.03 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.04 | 0.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| 4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.00 | 0.03 | 0.01 | 0.00 | 0.04 | 0.02 | 0.00 |
| 6 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.11 |
| 8 | 0.00 | 0.00 | 0.00 | 0.01 | 0.01 | 0.11 | 0.06 | 0.08 | 0.00 | 0.03 | 0.00 | 0.06 | 0.01 | 0.00 | 0.00 | 0.05 | 0.01 | 0.15 | 0.00 | 0.00 | 0.00 | 0.04 | 0.03 | 0.27 |
| 9 | 0.06 | 0.02 | 0.00 | 0.05 | 0.15 | 0.02 | 0.14 | 0.20 | 0.25 | 0.05 | 0.02 | 0.15 | 0.05 | 0.03 | 0.02 | 0.17 | 0.01 | 0.00 | 0.01 | 0.03 | 0.07 | 0.00 | 0.02 | 0.00 |
| 10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | ---- | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.02 | 0.02 | 0.20 |
| 12 | 0.04 | 0.07 | 0.02 | 0.09 | 0.05 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.05 | 0.10 | 0.10 | 0.08 | 0.08 | 0.21 | 0.01 | 0.03 | 0.12 | 0.26 |
| 13 | 0.16 | 0.14 | 0.06 | 0.12 | 0.06 | 0.02 | 0.09 | 0.02 | 0.02 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.08 | 0.00 | 0.21 | 0.03 |
| 14 | 0.00 | 0.21 | 0.09 | 0.09 | 0.09 | 0.01 | 0.08 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.01 | 0.00 |
| 15 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.09 | 0.03 | 0.17 | 0.00 | 0.00 | 0.00 | 0.04 | 0.02 | 0.20 | 0.06 |
| 16 | 0.02 | 0.18 | 0.13 | 0.01 | 0.38 | 0.29 | 0.46 | 0.67 | 1.31 | 0.18 | 0.82 | 0.14 | 0.00 | 0.00 | 0.06 | 0.01 | 0.02 | 0.01 | 0.08 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| 17 | 0.25 | 0.00 | 0.02 | 0.00 | 0.00 | 0.05 | 0.01 | 0.07 | 0.04 | 0.07 | 0.14 | 0.05 | 0.05 | 0.12 | 0.16 | 0.04 | 0.23 | 0.18 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 |
| 18 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.23 | 0.05 | 0.40 | 0.57 | 0.23 | 0.10 | 0.07 | 0.00 | 0.01 | 0.00 | 0.00 |
| 19 | 0.00 | 0.00 | 0.00 | 0.01 | 0.12 | 0.01 | 0.00 | 0.00 | 0.00 | 0.09 | 0.10 | 0.08 | 0.02 | 0.02 | 0.00 | 0.00 | 0.02 | 0.39 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.04 | 0.01 | 0.13 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 |
| 21 | 0.03 | 0.04 | 0.00 | 0.00 | 0.01 | 0.00 | 0.29 | 0.04 | 0.05 | 0.02 | 0.18 | 0.18 | 0.07 | 0.07 | 0.06 | 0.03 | 0.09 | 0.12 | 0.08 | 0.20 | 0.17 | 0.32 | 0.20 | 1.33 |
| 22 | 1.29 | 2.23 | 1.48 | 1.47 | 1.04 | 0.54 | 0.47 | ---- | 0.10 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.04 | 0.01 | 0.01 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| 23 | 0.16 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.01 | 0.06 | 0.02 | 0.00 | 0.01 | 0.02 | 0.07 | 0.11 | 0.10 | 0.03 | 0.12 | 0.09 | 0.03 | 0.06 | 0.50 | 0.98 |
| 24 | 0.72 | 0.29 | 0.10 | 0.06 | 0.07 | 0.05 | 0.21 | 0.36 | 0.04 | 0.04 | 0.06 | 0.04 | 0.06 | 0.18 | 0.23 | 0.09 | 0.09 | 0.11 | 0.16 | 0.12 | 0.13 | 0.12 | 0.03 | 0.01 |
| 25 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 |
| 30 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Table 3-5. Precipitation Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM SO2 (PPB ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 1 | 3 | ---- | ---- | ---- | ---- | ---- | ---- | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ---- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | ---- | ---- | ---- | ---- | ---- | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 |
| 11 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 15 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | ---- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 |
| 18 | 5 | 5 | 4 | 4 | 4 | 4 | 6 | 5 | 4 | 5 | 4 | 4 | 3 | 2 | 2 | 3 | 4 | 4 | 7 | 8 | 8 | 8 | 8 | 8 |
| 19 | 8 | 8 | 8 | 7 | 7 | 7 | 7 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 |
| 20 | 6 | 5 | 5 | 5 | 5 | 5 | ---- | 5 | 5 | 5 | 5 | 4 | 4 | 3 | 3 | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 |
| 21 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 7 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 4 |
| 22 | 4 | 4 | 4 | 5 | 5 | 7 | 32 | ---- | 15 | 54 | 25 | 5 | 3 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 4 | 4 | 5 |
| 23 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 2 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 7 |
| 24 | 46 | 24 | 14 | 8 | 10 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 1 | 5 | 3 | 4 | 5 | 4 | 2 | 14 | 35 | 25 | 3 | 2 | 2 | 3 | 3 | 8 | 47 | 17 | 6 | 6 | 5 | 4 |
| 26 | 4 | 51 | 54 | 31 | 14 | 7 | 9 | 10 | 13 | 30 | 4 | 2 | 1 | 0 | 2 | 24 | 20 | 11 | 1 | ---- | 4 | 4 | 4 | 3 |
| 27 | 3 | 3 | 3 | 3 | 8 | 6 | 8 | 7 | 11 | 16 | 11 | 4 | 10 | 20 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 18 |
| 28 | 16 | 17 | 22 | 21 | 16 | 11 | 11 | 9 | 10 | 12 | 11 | 11 | 8 | 7 | 4 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 2 | 3 |
| 29 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 9 | 13 | 8 | 7 | 4 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 4 | 4 | 4 | 3 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 2 | 12 | 64 | 9 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 2 | 3 | 5 | 11 | 6 | 3 | ---- | 30 | 15 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 12 | 7 | 4 |

Table 3-6. Sulfur Dioxide Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM H2S (PPB ) DATA FOR: DEC 1990

| HR-END DAY | HOURS (HST) 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 2 | 1 | 1 | 1 | 0 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 |
| 3 | 2 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 1 |
| 4 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 5 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| 7 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ---- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| 10 | 2 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 3 | 3 | ---- | ---- | ---- | ---- | ---- | 8 | 6 | 5 | 5 | 5 |
| 11 | 5 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | 3 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 |
| 12 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 14 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 |
| 15 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ---- | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| 19 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 20 | 1 | 0 | 0 | 0 | 0 | 0 | ---- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ---- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 2 |
| 26 | 2 | 3 | 4 | 4 | 3 | 3 | 4 | 4 | 3 | 3 | 2 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 3 | 4 | 4 | 4 | 4 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 |
| 31 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | ---- | ---- | ---- | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 3-7. Hydrogen Sulfide Monthly Summary Site 1

HECO ENVIRONMENTAL LABORATORY
ENVIRONMENTAL DEPARTMENT
Rainwater Analysis Report

Report Date: January 21, 1991

Site: True/Geothermal
Pahoa, Hawaii

Sample Date: 12/02/90 - 01/02/91
(Received 01/08/91)

| Parameter | Conc. (ug/l) True 17(1-3) |
|---|---|
| pH | 4.55 |
| Aluminum | <10.0 |
| Arsenic | <5.0 |
| Barium | <20.0 |
| Cadmium | <1.0 |
| Chromium | <4.0 |
| Copper | <10.0 |
| Iron | <10.0 |
| Lead | <5.0 |
| Magnesium | 230 |
| Manganese | <2.0 |
| Mercury | <0.50 |
| Selenium | <5.0 |
| Silver | <2.0 |
| Sodium | 1,900 |
| Zinc | <10.0 |
| Bromide | <10 |
| Chloride | 3,470 |
| Fluoride | 33 |
| Phosphate | <10 |
| Nitrite | <4 |
| Nitrate | 2 |
| Sulfate | 1,090 |
| Sulfite | <150 |

Analyzed by: C.K. B.K. C. Kishimoto/G. Kitsuwa

Approved by: _____
George Yasutome
Senior Chemist

Table 3-8. Rain Water Analyses Monthly Summary Site 1
12/01/90-01/02/90

295/01-015 PROTOCOL: 5 SA

SAMPLE ID: M1635
PARTICLE SIZE: T
ANALYSIS ID: M1635

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 4.+- 10. MICROGRAMS

| ELEMENT | UG/CM2 | UG/FILTER | PERCENT |
|---|---|---|---|
| AL | .0018+- .0045 | .023+- .058 | .5760+- 2.0365 |
| SI | .0107+- .0033 | .137+- .042 | 3.4240+- 8.6249 |
| P | .0000+- .0014 | .000+- .018 | .0000+- .4480 |
| S | .0132+- .0067 | .169+- .086 | 4.2240+-10.7755 |
| CL | .2571+- .0294 | 3.291+- .376 | 82.2720+-205.900 |
| K | .0245+- .0033 | .314+- .042 | 7.8400+-19.6284 |
| CA | .0123+- .0018 | .157+- .023 | 3.9360+- 9.8568 |
| TI | .0034+- .0006 | .044+- .008 | 1.0880+- 2.7268 |
| V | .0002+- .0004 | .003+- .005 | .0640+- .2049 |
| CR | .0011+- .0004 | .014+- .005 | .3520+- .8893 |
| MN | .0010+- .0004 | .013+- .005 | .3200+- .8102 |
| FE | .0235+- .0016 | .301+- .020 | 7.5200+-18.8070 |
| NI | .0014+- .0004 | .018+- .005 | .4480+- 1.1273 |
| CU | .0121+- .0008 | .155+- .010 | 3.8720+- 9.6834 |
| ZN | .0043+- .0005 | .055+- .006 | 1.3760+- 3.4437 |
| GA | .0000+- .0003 | .000+- .004 | .0000+- .0960 |
| GE | .0000+- .0003 | .000+- .004 | .0000+- .0960 |
| AS | .0000+- .0010 | .000+- .013 | .0000+- .3200 |
| SE | .0000+- .0004 | .000+- .005 | .0000+- .1280 |
| BR | .0004+- .0005 | .005+- .006 | .1280+- .3578 |
| RB | .0005+- .0007 | .006+- .009 | .1600+- .4584 |
| SR | .0000+- .0008 | .000+- .010 | .0000+- .2560 |
| Y | .0000+- .0009 | .000+- .012 | .0000+- .2880 |
| ZR | .0003+- .0013 | .004+- .017 | .0960+- .4803 |
| MO | .0000+- .0017 | .000+- .022 | .0000+- .5440 |
| PD | .0000+- .0031 | .000+- .040 | .0000+- .9920 |
| AG | .0000+- .0041 | .000+- .052 | .0000+- 1.3120 |
| CD | .0000+- .0050 | .000+- .064 | .0000+- 1.6000 |
| IN | .0054+- .0062 | .069+- .079 | 1.7280+- 4.7538 |
| SN | .0078+- .0075 | .100+- .096 | 2.4960+- 6.6856 |
| SB | .0162+- .0094 | .207+- .120 | 5.1840+-13.3045 |
| BA | .0000+- .0369 | .000+- .472 | .0000+-11.8080 |
| LA | .0000+- .0512 | .000+- .655 | .0000+-16.3840 |
| HG | .0000+- .0006 | .000+- .008 | .0000+- .1920 |
| PB | .0029+- .0017 | .037+- .022 | .9280+- 2.3829 |

Table 3-9. Metals Filter Analyses December 1, 1990 Site 1

295/01-015 PROTOCOL: 5 SA

SAMPLE ID: M1636
PARTICLE SIZE: T
ANALYSIS ID: M1636

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 7.+- 10. MICROGRAMS

| ELEMENT | UG/CM2 | UG/FILTER | PERCENT |
|---|---|---|---|
| AL | .0186+- .0049 | .238+- .063 | 3.4011+- 4.9407 |
| SI | .0193+- .0038 | .247+- .049 | 3.5291+- 5.0893 |
| P | .0000+- .0014 | .000+- .018 | .0000+- .2560 |
| S | .0420+- .0076 | .538+- .097 | 7.6800+-11.0591 |
| CL | .1690+- .0196 | 2.163+- .251 | 30.9029+-44.2922 |
| K | .0194+- .0027 | .248+- .035 | 3.5474+- 5.0917 |
| CA | .0134+- .0019 | .172+- .024 | 2.4503+- 3.5176 |
| TI | .0016+- .0006 | .020+- .008 | .2926+- .4321 |
| V | .0006+- .0004 | .008+- .005 | .1097+- .1730 |
| CR | .0016+- .0004 | .020+- .005 | .2926+- .4243 |
| MN | .0000+- .0004 | .000+- .005 | .0000+- .0731 |
| FE | .0163+- .0013 | .209+- .017 | 2.9806+- 4.2646 |
| NI | .0007+- .0004 | .009+- .005 | .1280+- .1969 |
| CU | .0060+- .0006 | .077+- .008 | 1.0971+- 1.5712 |
| ZN | .0025+- .0004 | .032+- .005 | .4571+- .6571 |
| GA | .0000+- .0003 | .000+- .004 | .0000+- .0549 |
| GE | .0000+- .0003 | .000+- .004 | .0000+- .0549 |
| AS | .0007+- .0009 | .009+- .012 | .1280+- .2460 |
| SE | .0000+- .0004 | .000+- .005 | .0000+- .0731 |
| BR | .0000+- .0005 | .000+- .006 | .0000+- .0914 |
| RB | .0002+- .0006 | .003+- .008 | .0366+- .1215 |
| SR | .0003+- .0007 | .004+- .009 | .0549+- .1501 |
| Y | .0000+- .0009 | .000+- .012 | .0000+- .1646 |
| ZR | .0000+- .0012 | .000+- .015 | .0000+- .2194 |
| MO | .0003+- .0015 | .004+- .019 | .0549+- .2853 |
| PD | .0013+- .0029 | .017+- .037 | .2377+- .6297 |
| AG | .0008+- .0039 | .010+- .050 | .1463+- .7431 |
| CD | .0000+- .0047 | .000+- .060 | .0000+- .8594 |
| IN | .0042+- .0060 | .054+- .077 | .7680+- 1.5516 |
| SN | .0000+- .0075 | .000+- .096 | .0000+- 1.3714 |
| SB | .0135+- .0094 | .173+- .120 | 2.4686+- 3.9231 |
| BA | .0440+- .0361 | .563+- .462 | 8.0457+-13.2546 |
| LA | .0000+- .0498 | .000+- .637 | .0000+- 9.1063 |
| HG | .0003+- .0006 | .004+- .008 | .0549+- .1348 |
| PB | .0000+- .0017 | .000+- .022 | .0000+- .3109 |

Table 3-10. Metals Filter Analyses December 7, 1990 Site 1

295/01-015 PROTOCOL: 5 SA

SAMPLE ID: M1637
PARTICLE SIZE: T
ANALYSIS ID: M1637

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 8.+- 10. MICROGRAMS

| ELEMENT | UG/CM2 | UG/FILTER | PERCENT |
|---|---|---|---|
| AL | .0000+- .0045 | .000+- .058 | .0000+- .7200 |
| SI | .0100+- .0034 | .128+- .044 | 1.6000+- 2.0727 |
| P | .0000+- .0014 | .000+- .018 | .0000+- .2240 |
| S | .0329+- .0076 | .421+- .097 | 5.2640+- 6.6914 |
| CL | .5798+- .0654 | 7.421+- .837 | 92.7680+-116.424 |
| K | .0166+- .0026 | .212+- .033 | 2.6560+- 3.3460 |
| CA | .0145+- .0021 | .186+- .027 | 2.3200+- 2.9194 |
| TI | .0010+- .0006 | .013+- .008 | .1600+- .2218 |
| V | .0000+- .0004 | .000+- .005 | .0000+- .0640 |
| CR | .0009+- .0004 | .012+- .005 | .1440+- .1910 |
| MN | .0000+- .0004 | .000+- .005 | .0000+- .0640 |
| FE | .0142+- .0012 | .182+- .015 | 2.2720+- 2.8465 |
| NI | .0000+- .0005 | .000+- .006 | .0000+- .0800 |
| CU | .0049+- .0006 | .063+- .008 | .7840+- .9847 |
| ZN | .0022+- .0004 | .028+- .005 | .3520+- .4446 |
| GA | .0006+- .0003 | .008+- .004 | .0960+- .1292 |
| GE | .0000+- .0003 | .000+- .004 | .0000+- .0480 |
| AS | .0003+- .0009 | .004+- .012 | .0480+- .1560 |
| SE | .0000+- .0004 | .000+- .005 | .0000+- .0640 |
| BR | .0002+- .0005 | .003+- .006 | .0320+- .0894 |
| RB | .0000+- .0006 | .000+- .008 | .0000+- .0960 |
| SR | .0000+- .0008 | .000+- .010 | .0000+- .1280 |
| Y | .0000+- .0009 | .000+- .012 | .0000+- .1440 |
| ZR | .0000+- .0013 | .000+- .017 | .0000+- .2080 |
| MO | .0000+- .0016 | .000+- .020 | .0000+- .2560 |
| PD | .0000+- .0031 | .000+- .040 | .0000+- .4960 |
| AG | .0000+- .0042 | .000+- .054 | .0000+- .6720 |
| CD | .0000+- .0050 | .000+- .064 | .0000+- .8000 |
| IN | .0000+- .0062 | .000+- .079 | .0000+- .9920 |
| SN | .0003+- .0075 | .004+- .096 | .0480+- 1.2015 |
| SB | .0046+- .0095 | .059+- .122 | .7360+- 1.7767 |
| BA | .0227+- .0369 | .291+- .472 | 3.6320+- 7.4477 |
| LA | .0810+- .0508 | 1.037+- .650 | 12.9600+-18.1247 |
| HG | .0008+- .0006 | .010+- .008 | .1280+- .1866 |
| PB | .0000+- .0017 | .000+- .022 | .0000+- .2720 |

Table 3-11. Metals Filter Analyses December 13, 1990 Site 1

295/01-015 PROTOCOL: 5 S

SAMPLE ID: M1638
PARTICLE SIZE: N
ANALYSIS ID: M1638

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 0.+- 0. MICROGRAMS

| ELEMENT | UG/CM2 | | UG/FILTER | |
|---|---|---|---|---|
| AL | .0109+- | .0026 | .140+- | .033 |
| SI | .0062+- | .0016 | .079+- | .020 |
| P | .0000+- | .0014 | .000+- | .018 |
| S | .0241+- | .0062 | .308+- | .079 |
| CL | .0534+- | .0052 | .684+- | .067 |
| K | .0057+- | .0017 | .073+- | .022 |
| CA | .0024+- | .0011 | .031+- | .014 |
| TI | .0005+- | .0006 | .006+- | .008 |
| V | .0000+- | .0005 | .000+- | .006 |
| CR | .0002+- | .0004 | .003+- | .005 |
| MN | .0000+- | .0004 | .000+- | .005 |
| FE | .0165+- | .0013 | .211+- | .017 |
| NI | .0002+- | .0005 | .003+- | .006 |
| CU | .0042+- | .0005 | .054+- | .006 |
| ZN | .0008+- | .0004 | .010+- | .005 |
| GA | .0000+- | .0003 | .000+- | .004 |
| GE | .0006+- | .0003 | .008+- | .004 |
| AS | .0000+- | .0010 | .000+- | .013 |
| SE | .0000+- | .0004 | .000+- | .005 |
| BR | .0000+- | .0005 | .000+- | .006 |
| RB | .0007+- | .0007 | .009+- | .009 |
| SR | .0004+- | .0008 | .005+- | .010 |
| Y | .0000+- | .0009 | .000+- | .012 |
| ZR | .0000+- | .0013 | .000+- | .017 |
| MO | .0000+- | .0017 | .000+- | .022 |
| PD | .0000+- | .0031 | .000+- | .040 |
| AG | .0000+- | .0042 | .000+- | .054 |
| CD | .0000+- | .0051 | .000+- | .065 |
| IN | .0000+- | .0063 | .000+- | .081 |
| SN | .0007+- | .0078 | .009+- | .100 |
| SB | .0187+- | .0097 | .239+- | .124 |
| BA | .0000+- | .0382 | .000+- | .489 |
| LA | .0000+- | .0524 | .000+- | .671 |
| HG | .0000+- | .0007 | .000+- | .009 |
| PB | .0026+- | .0018 | .033+- | .023 |

Table 3-12. Metals Filter Analyses December 19, 1990 Site 1

295/01-015 PROTOCOL: 5 SA

SAMPLE ID: M1639
PARTICLE SIZE: T
ANALYSIS ID: M1639

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 5.+- 10. MICROGRAMS

| ELEMENT | UG/CM2 | UG/FILTER | PERCENT |
|---|---|---|---|
| AL | .0270+- .0056 | .346+- .072 | 6.9120+-13.8981 |
| SI | .0341+- .0055 | .436+- .070 | 8.7296+-17.5159 |
| P | .0000+- .0014 | .000+- .018 | .0000+- .3584 |
| S | .1284+- .0161 | 1.644+- .206 | 32.8704+-65.8699 |
| CL | .1797+- .0209 | 2.300+- .268 | 46.0032+-92.1618 |
| K | .0206+- .0029 | .264+- .037 | 5.2736+-10.5733 |
| CA | .0090+- .0016 | .115+- .020 | 2.3040+- 4.6262 |
| TI | .0016+- .0006 | .020+- .008 | .4096+- .8335 |
| V | .0000+- .0004 | .000+- .005 | .0000+- .1024 |
| CR | .0006+- .0004 | .008+- .005 | .1536+- .3238 |
| MN | .0000+- .0004 | .000+- .005 | .0000+- .1024 |
| FE | .0272+- .0018 | .348+- .023 | 6.9632+-13.9340 |
| NI | .0016+- .0004 | .020+- .005 | .4096+- .8256 |
| CU | .0069+- .0006 | .088+- .008 | 1.7664+- 3.5361 |
| ZN | .0027+- .0004 | .035+- .005 | .6912+- 1.3862 |
| GA | .0002+- .0003 | .003+- .004 | .0512+- .1280 |
| GE | .0000+- .0003 | .000+- .004 | .0000+- .0768 |
| AS | .0003+- .0009 | .004+- .012 | .0768+- .2769 |
| SE | .0000+- .0004 | .000+- .005 | .0000+- .1024 |
| BR | .0000+- .0004 | .000+- .005 | .0000+- .1024 |
| RB | .0000+- .0006 | .000+- .008 | .0000+- .1536 |
| SR | .0000+- .0007 | .000+- .009 | .0000+- .1792 |
| Y | .0006+- .0008 | .008+- .010 | .1536+- .3692 |
| ZR | .0000+- .0013 | .000+- .017 | .0000+- .3328 |
| MO | .0000+- .0016 | .000+- .020 | .0000+- .4096 |
| PD | .0000+- .0030 | .000+- .038 | .0000+- .7680 |
| AG | .0000+- .0040 | .000+- .051 | .0000+- 1.0240 |
| CD | .0000+- .0047 | .000+- .060 | .0000+- 1.2032 |
| IN | .0000+- .0059 | .000+- .076 | .0000+- 1.5104 |
| SN | .0069+- .0075 | .088+- .096 | 1.7664+- 4.0208 |
| SB | .0073+- .0092 | .093+- .118 | 1.8688+- 4.4178 |
| BA | .0533+- .0357 | .682+- .457 | 13.6448+-28.7793 |
| LA | .0107+- .0494 | .137+- .632 | 2.7392+-13.7820 |
| HG | .0000+- .0006 | .000+- .008 | .0000+- .1536 |
| PB | .0000+- .0017 | .000+- .022 | .0000+- .4352 |

Table 3-13. Metals Filter Analyses December 25, 1990 Site 1

295/01-015 PROTOCOL: 5 SA

SAMPLE ID: M1640
PARTICLE SIZE: T
ANALYSIS ID: M1640

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 42.+- 10. MICROGRAMS

| ELEMENT | UG/CM2 | UG/FILTER | PERCENT |
|---|---|---|---|
| AL | .0275+- .0060 | .352+- .077 | .8381+- .2707 |
| SI | .0736+- .0104 | .942+- .133 | 2.2430+- .6210 |
| P | .0000+- .0015 | .000+- .019 | .0000+- .0457 |
| S | .1337+- .0169 | 1.711+- .216 | 4.0747+- 1.0984 |
| CL | .4923+- .0557 | 6.301+- .713 | 15.0034+- 3.9551 |
| K | .0349+- .0044 | .447+- .056 | 1.0636+- .2866 |
| CA | .0390+- .0046 | .499+- .059 | 1.1886+- .3158 |
| TI | .0095+- .0009 | .122+- .012 | .2895+- .0742 |
| V | .0016+- .0005 | .020+- .006 | .0488+- .0192 |
| CR | .0020+- .0004 | .026+- .005 | .0610+- .0190 |
| MN | .0003+- .0004 | .004+- .005 | .0091+- .0124 |
| FE | .0461+- .0027 | .590+- .035 | 1.4050+- .3445 |
| NI | .0003+- .0005 | .004+- .006 | .0091+- .0154 |
| CU | .0062+- .0006 | .079+- .008 | .1890+- .0486 |
| ZN | .0047+- .0005 | .060+- .006 | .1432+- .0374 |
| GA | .0000+- .0003 | .000+- .004 | .0000+- .0091 |
| GE | .0002+- .0003 | .003+- .004 | .0061+- .0093 |
| AS | .0000+- .0009 | .000+- .012 | .0000+- .0274 |
| SE | .0000+- .0004 | .000+- .005 | .0000+- .0122 |
| BR | .0002+- .0005 | .003+- .006 | .0061+- .0153 |
| RB | .0003+- .0006 | .004+- .008 | .0091+- .0184 |
| SR | .0004+- .0008 | .005+- .010 | .0122+- .0246 |
| Y | .0000+- .0009 | .000+- .012 | .0000+- .0274 |
| ZR | .0017+- .0013 | .022+- .017 | .0518+- .0415 |
| MO | .0004+- .0016 | .005+- .020 | .0122+- .0488 |
| PD | .0009+- .0030 | .012+- .038 | .0274+- .0917 |
| AG | .0080+- .0040 | .102+- .051 | .2438+- .1350 |
| CD | .0052+- .0048 | .067+- .061 | .1585+- .1511 |
| IN | .0000+- .0062 | .000+- .079 | .0000+- .1890 |
| SN | .0022+- .0076 | .028+- .097 | .0670+- .2322 |
| SB | .0000+- .0094 | .000+- .120 | .0000+- .2865 |
| BA | .0000+- .0373 | .000+- .477 | .0000+- 1.1368 |
| LA | .0232+- .0510 | .297+- .653 | .7070+- 1.5634 |
| HG | .0000+- .0006 | .000+- .008 | .0000+- .0183 |
| PB | .0028+- .0017 | .036+- .022 | .0853+- .0557 |

Table 3-14. Metals Filter Analyses December 31, 1990 Site 1

MEASUREMENT TECHNOLOGIES

8" X 10" FILTER GRAVIMETRIC REPORT

| Run Day | NEA ID. | FILTER TYPE | TARE WT. GRAMS | GROSS WT. GRAMS | NET WT. MILLIGRAMS |
|---|---|---|---|---|---|
| 12/01/90 | M1885 | TSP | 4.3155 | 4.3322 | 16.7 |
| 12/01/90 | M1886 | PM-10 | 4.3281 | 4.3423 | 14.2 |
| 12/07/90 | M1887 | TSP | 4.3044 | 4.3184 | 14.0 |
| 12/07/90 | M1888 | PM-10 | 4.3512 | 4.3642 | 13.0 |
| 12/13/90 | M1889 | TSP | 4.3808 | 4.4085 | 27.7 |
| 12/13/90 | M1890 | PM-10 | 4.4817 | 4.5006 | 18.9 |
| 12/19/90 | M1891 | TSP | 4.5283 | 4.5402 | 11.9 |
| 12/19/90 | M1892 | PM-10 | 4.5009 | 4.5114 | 10.5 |
| 12/25/90 | M1893 | TSP | 4.4911 | 4.5112 | 20.1 |
| 12/25/90 | M1894 | PM-10 | 4.4762 | 4.4919 | 15.7 |
| 12/31/90 | M1895 | TSP | 4.3779 | 4.4037 | 25.8 |
| 12/31/90 | M1896 | PM-10 | 4.2960 | 4.3179 | 21.9 |

Table 3-15. Total Suspended Particulates (TSP) and Inhaleable Particulates (PM-10) Loading Monthly Summary Site 1

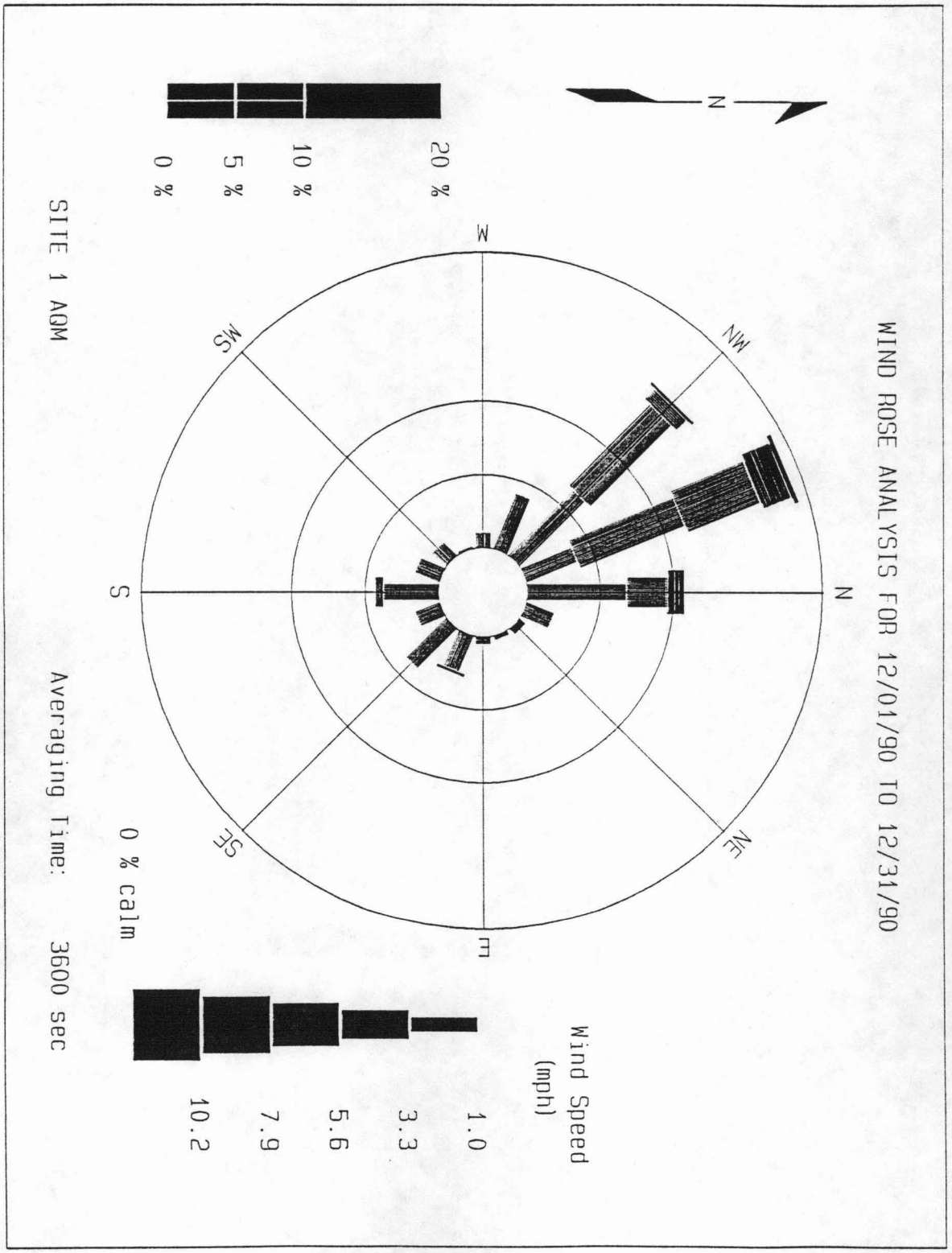


Figure 3-1. Wind Rose Analysis Site 1

WD (DEG) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | | | |
|---|---|---|---|---|---|
| Highest Value: | 359. | 12/28/90 | 16:00:00 | | |
| Second Highest: | 359. | 12/30/90 | 13:00:00 | | |
| Lowest Value: | 0. | 12/03/90 | 14:00:00 | | |
| Arithmetic Mean: | 245. | | 10.000 | Percentile: | 85. |
| Standard Deviation: | 105. | | 20.000 | Percentile: | 143. |
| | | | 30.000 | Percentile: | 197. |
| Geometric Mean: | 184. | | 40.000 | Percentile: | 235. |
| Standard Deviation: | 3. | | 50.000 | Percentile: | 293. |
| | | | 60.000 | Percentile: | 313. |
| Valid Data: | 686 | | 70.000 | Percentile: | 324. |
| Invalid Data: | 58 | | 80.000 | Percentile: | 337. |
| Missing Data: | 0 | | 90.000 | Percentile: | 347. |
| Data Recovery: | 92.20% | | 100.000 | Percentile: | 359. |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-16. Wind Direction Summary Statistics Site 1

WS (MPH) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | | | |
|---|---|---|---|---|---|
| Highest Value: | 10.2 | 12/19/90 | 16:00:00 | | |
| Second Highest: | 10.2 | 12/31/90 | 23:00:00 | | |
| Lowest Value: | 0.0 | 12/06/90 | 01:00:00 | | |
| Arithmetic Mean: | 2.4 | | 10.000 | Percentile: | 0.3 |
| Standard Deviation: | 2.1 | | 20.000 | Percentile: | 0.7 |
| | | | 30.000 | Percentile: | 0.9 |
| Geometric Mean: | 1.6 | | 40.000 | Percentile: | 1.3 |
| Standard Deviation: | 2.7 | | 50.000 | Percentile: | 1.7 |
| | | | 60.000 | Percentile: | 2.4 |
| Valid Data: | 686 | | 70.000 | Percentile: | 3.1 |
| Invalid Data: | 58 | | 80.000 | Percentile: | 4.2 |
| Missing Data: | 0 | | 90.000 | Percentile: | 5.5 |
| Data Recovery: | 92.20% | | 100.000 | Percentile: | 10.2 |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-17. Wind Speed Summary Statistics Site 1

Sigé1 (deg) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 121.2 | 12/06/90 | 23:00:00 |
| Second Highest: | 119.7 | 12/07/90 | 02:00:00 |
| Lowest Value: | 10.2 | 12/30/90 | 23:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 48.3 | 10.000 Percentile: | 19.1 |
| Standard Deviation: | 23.4 | 20.000 Percentile: | 23.3 |
| | | 30.000 Percentile: | 29.0 |
| Geometric Mean: | 42.3 | 40.000 Percentile: | 37.8 |
| Standard Deviation: | 1.7 | 50.000 Percentile: | 48.2 |
| | | 60.000 Percentile: | 56.4 |
| Valid Data: | 686 | 70.000 Percentile: | 64.2 |
| Invalid Data: | 58 | 80.000 Percentile: | 70.6 |
| Missing Data: | 0 | 90.000 Percentile: | 78.7 |
| Data Recovery: | 92.20% | 100.000 Percentile: | 121.2 |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-18. Sigma Theta Summary Statistics Site 1

TEMP (DEG F) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 79.5 | 12/25/90 | 15:00:00 |
| Second Highest: | 79.3 | 12/07/90 | 11:00:00 |
| Lowest Value: | 58.1 | 12/31/90 | 03:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 67.0 | 10.000 Percentile: | 62.4 |
| Standard Deviation: | 4.0 | 20.000 Percentile: | 63.6 |
| | | 30.000 Percentile: | 64.8 |
| Geometric Mean: | 66.9 | 40.000 Percentile: | 65.6 |
| Standard Deviation: | 1.1 | 50.000 Percentile: | 66.6 |
| | | 60.000 Percentile: | 67.5 |
| Valid Data: | 740 | 70.000 Percentile: | 68.5 |
| Invalid Data: | 4 | 80.000 Percentile: | 69.9 |
| Missing Data: | 0 | 90.000 Percentile: | 72.5 |
| Data Recovery: | 99.46% | 100.000 Percentile: | 79.5 |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-19 Ambient Temperature Summary Statistics Site 1

RAIN (INCH) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 2.23 | 12/22/90 | 01:00:00 |
| Second Highest: | 1.48 | 12/22/90 | 02:00:00 |
| Lowest Value: | 0.00 | 12/01/90 | 00:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 0.05 | 10.000 Percentile: | 0.00 |
| Standard Deviation: | 0.17 | 20.000 Percentile: | 0.00 |
| | | 30.000 Percentile: | 0.00 |
| Geometric Mean: | 0.00 | 40.000 Percentile: | 0.00 |
| Standard Deviation: | 1.00 | 50.000 Percentile: | 0.00 |
| | | 60.000 Percentile: | 0.00 |
| Valid Data: | 742 | 70.000 Percentile: | 0.01 |
| Invalid Data: | 2 | 80.000 Percentile: | 0.04 |
| Missing Data: | 0 | 90.000 Percentile: | 0.11 |
| Data Recovery: | 99.73% | 100.000 Percentile: | 2.23 |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-20. Precipitation Summary Statistics Site 1

SO2 (PPB) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 64. | 12/30/90 | 11:00:00 |
| Second Highest: | 54. | 12/26/90 | 02:00:00 |
| Lowest Value: | 0. | 12/01/90 | 00:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 2. | 10.000 Percentile: | 0. |
| Standard Deviation: | 6. | 20.000 Percentile: | 0. |
| | | 30.000 Percentile: | 0. |
| Geometric Mean: | 1. | 40.000 Percentile: | 0. |
| Standard Deviation: | 2. | 50.000 Percentile: | 0. |
| | | 60.000 Percentile: | 1. |
| Valid Data: | 727 | 70.000 Percentile: | 1. |
| Invalid Data: | 17 | 80.000 Percentile: | 2. |
| Missing Data: | 0 | 90.000 Percentile: | 4. |
| Data Recovery: | 97.72% | 100.000 Percentile: | 64. |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-21. Sulfur Dioxide Summary Statistics Site 1

H2S (PPB) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 8. | 12/10/90 | 19:00:00 |
| Second Highest: | 6. | 12/10/90 | 20:00:00 |
| Lowest Value: | 0. | 12/01/90 | 00:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 1. | 10.000 Percentile: | 0. |
| Standard Deviation: | 1. | 20.000 Percentile: | 0. |
| | | 30.000 Percentile: | 0. |
| Geometric Mean: | 1. | 40.000 Percentile: | 0. |
| Standard Deviation: | 1. | 50.000 Percentile: | 0. |
| | | 60.000 Percentile: | 0. |
| Valid Data: | 732 | 70.000 Percentile: | 1. |
| Invalid Data: | 12 | 80.000 Percentile: | 1. |
| Missing Data: | 0 | 90.000 Percentile: | 2. |
| Data Recovery: | 98.39% | 100.000 Percentile: | 8. |

SITE 1 AQM Averaging Time: 3600 sec

Table 3-22. Hydrogen Sulfide Summary Statistics Site 1

## 3.2 Meteorological Monitoring Data Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET WD (DEG ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 359 | 351 | 338 | 325 | 332 | 321 | 323 | 331 | 341 | 351 | 7 | 31 | 30 | 27 | 28 | 352 | 345 | 327 | 18 | 346 | 350 | 310 | 320 | 323 |
| 2 | 324 | 327 | 321 | 323 | 331 | 344 | 305 | 318 | 304 | 344 | 9 | 41 | 50 | 41 | 66 | 56 | 35 | 346 | 330 | 312 | 308 | 312 | 311 | 310 |
| 3 | 326 | 309 | 324 | 303 | 296 | 306 | 303 | 302 | 348 | 339 | 360 | 43 | 46 | 43 | 39 | 41 | 30 | 1 | 340 | 332 | 331 | 338 | 332 | 335 |
| 4 | 341 | 334 | 317 | 300 | 306 | 319 | 309 | 308 | 325 | 337 | 337 | 1 | 16 | 26 | 17 | 16 | 359 | 348 | 346 | 348 | 341 | 332 | 331 | 337 |
| 5 | 335 | 333 | 333 | 336 | 336 | 332 | 334 | 330 | 339 | 342 | 346 | 1 | 9 | 5 | 14 | 352 | 345 | 328 | 334 | 329 | 321 | 315 | 310 | 305 |
| 6 | 287 | 283 | 294 | 290 | 301 | 304 | 289 | 292 | 345 | 5 | 22 | 38 | 43 | 49 | 56 | 48 | 41 | 32 | 14 | 14 | 20 | 309 | 299 | 292 |
| 7 | 288 | 284 | 279 | 273 | 270 | 268 | 268 | 269 | 309 | 34 | 49 | 61 | 61 | 39 | 34 | 39 | 39 | 35 | 40 | 43 | 32 | 29 | 41 | 19 |
| 8 | 11 | 334 | 313 | 338 | 324 | 322 | 337 | 335 | 312 | 326 | 336 | 1 | 21 | 25 | 25 | 352 | 340 | 358 | 6 | 351 | 354 | 355 | 355 | 4 |
| 9 | 40 | 53 | 35 | 33 | 16 | 32 | 47 | 58 | 50 | 49 | 45 | 50 | 48 | 52 | 51 | 61 | 44 | 52 | 49 | 48 | 57 | 51 | 46 | 43 |
| 10 | 41 | 33 | 23 | 2 | 344 | 348 | 341 | 340 | 345 | 359 | 33 | 34 | 46 | 37 | 42 | 49 | 37 | 21 | 7 | 1 | 357 | 349 | 359 | 350 |
| 11 | 346 | 352 | 341 | 340 | 319 | 322 | 314 | 326 | 340 | 359 | 45 | 25 | 44 | 39 | 46 | 43 | 45 | 43 | 12 | 41 | 6 | 51 | 351 | 323 |
| 12 | 312 | 3 | 354 | 12 | 359 | 347 | 343 | 337 | 345 | 3 | 348 | 356 | 48 | 49 | 20 | 50 | 39 | 359 | 35 | 33 | 51 | 52 | 60 | 66 |
| 13 | 58 | 70 | 61 | 66 | 72 | 69 | 77 | 50 | 52 | 50 | 48 | 48 | 44 | 53 | 48 | 46 | 41 | 38 | 5 | 342 | 0 | 358 | 39 | 47 |
| 14 | 27 | 6 | 347 | 343 | 13 | 12 | 48 | 55 | 62 | 53 | 51 | 51 | 55 | 53 | 55 | 64 | 61 | 54 | 22 | 57 | 341 | 325 | 336 | 336 |
| 15 | 318 | 317 | 325 | 316 | 312 | 344 | 316 | 304 | 334 | 330 | 27 | 47 | 65 | 81 | 58 | 350 | 89 | 134 | 304 | 278 | 282 | 315 | 309 | 317 |
| 16 | 320 | 259 | 94 | 51 | 126 | 112 | 124 | 111 | 98 | 117 | 133 | 98 | 84 | 93 | 96 | 108 | 98 | 95 | 88 | 92 | 72 | 89 | 78 | 90 |
| 17 | 108 | 110 | 120 | 120 | 132 | 134 | 107 | 86 | 104 | 115 | 116 | 110 | 111 | 123 | 119 | 84 | 87 | 55 | 62 | 59 | 33 | 316 | 298 | 284 |
| 18 | 307 | 330 | 315 | 323 | 318 | 311 | 329 | 313 | 321 | 336 | 337 | 359 | 11 | 30 | 354 | 346 | 43 | 29 | 346 | 326 | 313 | 302 | 312 | 316 |
| 19 | 326 | 330 | 329 | 321 | 336 | 335 | 317 | 306 | 336 | 330 | 336 | 332 | 326 | 341 | 20 | 359 | 342 | 347 | 0 | 351 | 337 | 339 | 335 | 335 |
| 20 | 339 | 335 | 332 | 323 | 305 | 310 | 313 | 307 | 309 | 305 | 301 | 352 | 2 | 21 | 20 | 20 | 326 | 24 | 319 | 317 | 327 | 336 | 341 | 327 |
| 21 | 312 | 315 | 303 | 311 | 302 | 298 | 196 | 253 | 291 | 66 | 73 | 73 | 80 | 87 | 89 | 90 | 21 | 72 | 276 | 286 | 321 | 128 | 119 | 105 |
| 22 | 234 | 188 | 197 | 273 | 34 | 288 | 309 | 236 | 253 | 281 | 184 | 149 | 140 | 155 | 154 | 176 | 174 | 171 | 171 | 169 | 136 | 143 | 180 | 199 |
| 23 | 155 | 133 | 165 | 171 | 180 | 181 | 181 | 179 | 190 | 169 | 189 | 177 | 177 | 181 | 179 | 183 | 179 | 188 | 177 | 182 | 185 | 183 | 315 | 302 |
| 24 | 286 | 32 | 290 | 310 | 159 | 114 | 140 | 174 | 179 | 166 | 154 | 161 | 169 | 165 | 165 | 180 | 195 | 205 | 178 | 185 | 196 | 205 | 201 | 214 |
| 25 | 206 | 194 | 244 | 302 | 299 | 245 | 180 | 170 | 216 | 240 | 348 | 223 | 201 | 193 | 204 | 209 | 209 | 233 | 230 | 201 | 198 | 206 | 204 | 207 |
| 26 | 204 | 250 | 262 | 188 | 259 | 262 | 258 | 257 | 258 | 209 | 181 | 191 | 185 | 193 | 214 | 245 | 15 | 345 | 313 | 305 | 296 | 284 | 276 | 259 |
| 27 | 265 | 270 | 265 | 262 | 268 | 255 | 235 | 235 | 270 | 179 | 156 | 160 | 165 | 184 | 203 | 206 | 208 | 214 | 200 | 165 | 286 | 302 | 268 | 242 |
| 28 | 294 | 292 | 282 | 279 | 284 | 285 | 283 | 291 | 309 | 345 | 26 | 32 | 60 | 55 | 54 | 63 | 47 | 34 | 278 | 250 | 251 | 212 | 215 | 206 |
| 29 | 199 | 211 | 223 | 260 | 259 | 340 | 279 | 334 | 354 | 20 | 20 | 33 | 29 | 18 | 20 | 23 | 5 | 345 | 336 | 339 | 333 | 328 | 323 | 326 |
| 30 | 317 | 314 | 315 | 306 | 305 | 304 | 301 | 292 | 319 | 339 | 352 | 37 | 53 | 46 | 68 | 42 | 12 | 340 | 321 | 306 | 279 | 270 | 256 | 254 |
| 31 | 263 | 265 | 258 | 258 | 301 | 267 | 263 | 308 | 328 | 347 | 5 | 360 | 356 | 349 | 350 | 342 | 339 | 343 | 338 | 336 | 332 | 336 | 335 | 340 |

Table 3-23. Wind Direction Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET WS (MPH ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.4 | 2.6 | 4.3 | 3.6 | 2.1 | 4.9 | 4.6 | 4.6 | 7.2 | 7.2 | 5.7 | 5.9 | 5.4 | 4.6 | 4.8 | 4.5 | 4.5 | 4.4 | 2.0 | 2.8 | 2.5 | 1.7 | 2.0 | 0.9 |
| 2 | 0.3 | 0.8 | 0.8 | 0.5 | 0.3 | 0.7 | 0.4 | 0.4 | 1.4 | 0.9 | 2.0 | 2.3 | 2.8 | 2.1 | 3.9 | 3.4 | 3.1 | 1.8 | 2.1 | 2.4 | 4.5 | 3.6 | 4.1 | 3.1 |
| 3 | 3.2 | 4.3 | 2.7 | 4.2 | 4.1 | 4.4 | 5.3 | 2.1 | 2.6 | 5.3 | 4.2 | 5.7 | 7.0 | 7.4 | 6.8 | 6.7 | 4.0 | 3.0 | 4.7 | 5.6 | 5.3 | 4.4 | 4.3 | 5.2 |
| 4 | 5.0 | 5.7 | 3.5 | 4.2 | 2.6 | 1.7 | 3.7 | 3.3 | 5.5 | 5.2 | 7.0 | 6.4 | 7.0 | 6.7 | 6.1 | 6.8 | 6.3 | 6.8 | 5.9 | 4.7 | 5.4 | 5.9 | 6.6 | 6.9 |
| 5 | 6.4 | 5.8 | 6.4 | 6.7 | 7.6 | 7.8 | 8.3 | 6.2 | 7.3 | 8.9 | 8.7 | 7.6 | 7.5 | 8.0 | 7.4 | 8.3 | 7.9 | 6.9 | 6.9 | 5.8 | 5.5 | 3.8 | 2.4 | 3.4 |
| 6 | 3.1 | 1.7 | 0.9 | 0.6 | 2.6 | 0.5 | 0.0 | 0.1 | 0.3 | 2.3 | 3.2 | 4.3 | 5.0 | 5.3 | 5.8 | 5.9 | 4.4 | 0.8 | 0.1 | 0.1 | 0.1 | 0.2 | 0.5 | 0.7 |
| 7 | 0.7 | 0.6 | 0.7 | 1.1 | 0.0 | 0.4 | 2.7 | 1.7 | 0.7 | 1.1 | 2.0 | 2.9 | 6.5 | 6.6 | 6.0 | 6.3 | 5.6 | 4.1 | 4.2 | 3.1 | 2.6 | 1.4 | 1.0 | 1.1 |
| 8 | 0.1 | 0.1 | 0.9 | 2.8 | 3.3 | 1.0 | 0.5 | 4.3 | 2.9 | 4.1 | 5.4 | 5.3 | 4.1 | 7.1 | 6.7 | 7.3 | 8.1 | 6.1 | 6.5 | 7.2 | 7.1 | 8.3 | 7.3 | 5.8 |
| 9 | 6.7 | 7.0 | 5.0 | 4.0 | 5.8 | 7.1 | 7.8 | 8.2 | 8.2 | 9.3 | 8.5 | 9.5 | 7.2 | 8.8 | 9.1 | 7.6 | 6.1 | 6.0 | 6.9 | 6.6 | 6.9 | 5.6 | 5.2 | 4.4 |
| 10 | 5.0 | 4.2 | 4.6 | 3.4 | 5.7 | 3.0 | 3.2 | 5.2 | 4.7 | 4.6 | 8.3 | 7.9 | 9.4 | 7.0 | 8.2 | 7.9 | 6.1 | 3.0 | 2.5 | 3.8 | 3.2 | 3.1 | 3.2 | 2.8 |
| 11 | 3.2 | 3.2 | 2.6 | 3.4 | 3.6 | 4.0 | 4.6 | 4.5 | 5.6 | 5.4 | 6.1 | 6.2 | 7.2 | 6.8 | 5.2 | 5.2 | 6.4 | 4.3 | 1.8 | 3.0 | 1.6 | 4.8 | 3.5 | 3.3 |
| 12 | 3.3 | 2.2 | 2.0 | 2.8 | 2.0 | 2.0 | 2.5 | 2.4 | 3.7 | 4.5 | 5.3 | 4.0 | 6.6 | 5.3 | 4.2 | 4.5 | 4.1 | 2.8 | 3.8 | 3.5 | 7.6 | 6.1 | 6.3 | 7.3 |
| 13 | 4.9 | 6.8 | 4.7 | 5.1 | 6.8 | 6.0 | 5.3 | 3.1 | 3.7 | 4.1 | 5.1 | 6.1 | 6.2 | 8.0 | 8.1 | 6.0 | 6.7 | 4.4 | 2.4 | 4.0 | 3.6 | 2.1 | 4.1 | 6.6 |
| 14 | 4.0 | 2.0 | 3.4 | 3.9 | 3.5 | 2.7 | 1.5 | 3.9 | 6.0 | 4.6 | 3.0 | 3.5 | 6.8 | 5.9 | 4.7 | 5.2 | 5.1 | 4.1 | 2.6 | 4.2 | 1.6 | 2.0 | 2.3 | 3.5 |
| 15 | 4.5 | 3.0 | 2.8 | 3.0 | 2.1 | 0.8 | 2.4 | 2.3 | 1.1 | 3.5 | 3.1 | 4.3 | 3.3 | 2.6 | 2.8 | 0.8 | 1.6 | 0.6 | 0.1 | 0.4 | 0.4 | 2.8 | 3.1 | 1.0 |
| 16 | 1.4 | 1.1 | 3.4 | 0.1 | 2.5 | 1.1 | 1.2 | 1.1 | 1.8 | 0.2 | 2.5 | 3.8 | 5.8 | 6.0 | 4.7 | 3.7 | 3.7 | 2.1 | 2.4 | 0.7 | 1.2 | 0.9 | 1.4 | 1.0 |
| 17 | 1.4 | 1.2 | 1.6 | 1.1 | 0.4 | 0.4 | 0.5 | 0.9 | 1.8 | 0.5 | 0.9 | 2.8 | 3.0 | 3.1 | 3.5 | 1.6 | 1.7 | 1.0 | 1.7 | 0.7 | 0.3 | 0.6 | 1.4 | 0.3 |
| 18 | 1.8 | 2.6 | 1.7 | 0.3 | 2.1 | 2.8 | 2.9 | 3.9 | 4.5 | 4.4 | 4.2 | 1.9 | 4.0 | 4.1 | 6.2 | 6.2 | 9.5 | 7.7 | 10.3 | 8.9 | 7.4 | 4.8 | 5.5 | 6.5 |
| 19 | 6.3 | 6.5 | 6.0 | 5.5 | 5.5 | 5.5 | 4.5 | 3.7 | 4.9 | 7.7 | 8.5 | 6.9 | 7.6 | 7.9 | 4.7 | 6.4 | 10.4 | 8.1 | 7.4 | 8.4 | 8.7 | 9.2 | 7.4 | 6.5 |
| 20 | 5.4 | 6.6 | 4.5 | 5.5 | 5.0 | 3.0 | 4.7 | 5.3 | 4.4 | 3.1 | 3.3 | 0.6 | 1.2 | 0.7 | 2.3 | 1.3 | 1.8 | 1.5 | 2.9 | 4.0 | 3.8 | 3.2 | 3.2 | 3.4 |
| 21 | 3.7 | 2.5 | 1.8 | 2.1 | 2.6 | 1.0 | 0.8 | 2.0 | 0.5 | 1.5 | 1.1 | 3.6 | 5.6 | 6.0 | 3.6 | 0.6 | 0.1 | 1.0 | 0.2 | 0.7 | 0.3 | 0.8 | 0.9 | 2.2 |
| 22 | 2.6 | 2.6 | 0.3 | 2.0 | 0.5 | 0.1 | 0.1 | 0.5 | 0.1 | 0.4 | 0.1 | 0.2 | 0.3 | 1.0 | 1.4 | 2.6 | 2.5 | 2.3 | 1.4 | 2.6 | 0.6 | 0.6 | 0.1 | 0.2 |
| 23 | 0.2 | 0.2 | 0.7 | 0.4 | 0.1 | 1.7 | 1.1 | 2.6 | 1.9 | 1.6 | 2.7 | 2.8 | 2.8 | 2.8 | 4.3 | 4.2 | 2.4 | 1.3 | 1.7 | 0.5 | 0.9 | 0.3 | 0.3 | 0.1 |
| 24 | 1.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.6 | 2.2 | 3.1 | 5.4 | 6.6 | 6.6 | 5.3 | 5.8 | 6.9 | 5.3 | 5.8 | 6.2 | 5.1 | 4.8 | 4.3 | 4.9 | 3.9 | 1.5 | 1.2 |
| 25 | 0.3 | 0.6 | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 1.1 | 3.0 | 4.3 | 3.8 | 3.6 | 4.8 | 2.4 | 2.8 | 3.8 | 3.9 | 5.6 | 5.3 |
| 26 | 4.1 | 1.6 | 1.2 | 1.2 | 1.7 | 1.8 | 4.3 | 4.8 | 2.6 | 2.9 | 4.3 | 5.1 | 5.5 | 5.6 | 5.3 | 0.9 | 0.3 | 0.0 | 2.0 | 3.7 | 2.0 | 2.3 | 3.5 | 3.1 |
| 27 | 0.2 | 0.1 | 2.6 | 2.4 | 3.0 | 3.7 | 2.1 | 0.3 | 0.1 | 1.1 | 3.0 | 3.8 | 4.5 | 5.0 | 5.8 | 5.0 | 4.4 | 2.3 | 0.7 | 1.9 | 0.2 | 2.6 | 3.9 | 0.8 |
| 28 | 0.6 | 4.7 | 4.4 | 3.8 | 3.2 | 3.3 | 4.3 | 4.9 | 3.6 | 4.0 | 3.5 | 4.1 | 5.2 | 3.8 | 4.2 | 3.1 | 3.7 | 0.5 | 0.0 | 0.2 | 0.4 | 0.0 | 0.1 | 0.4 |
| 29 | 0.7 | 0.3 | 0.1 | 0.1 | 2.0 | 0.5 | 2.3 | 1.8 | 1.9 | 4.2 | 5.3 | 5.7 | 6.2 | 5.9 | 5.5 | 4.9 | 3.8 | 5.8 | 4.0 | 5.5 | 6.9 | 6.2 | 5.4 | 5.5 |
| 30 | 4.7 | 4.9 | 4.5 | 5.1 | 5.5 | 5.1 | 4.4 | 3.3 | 3.6 | 3.2 | 2.5 | 1.8 | 1.4 | 3.2 | 2.2 | 1.1 | 0.6 | 0.5 | 0.3 | 0.5 | 0.0 | 0.0 | 0.1 | 0.1 |
| 31 | 0.4 | 0.8 | 5.0 | 5.0 | 3.4 | 0.9 | 0.1 | 0.9 | 4.9 | 8.5 | 7.6 | 7.6 | 6.9 | 8.2 | 9.2 | 9.7 | 10.0 | 10.1 | 9.8 | 10.3 | 9.5 | 9.9 | 11.1 | 12.4 |

Table 3-24. Wind Speed Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET Sigθ1 (deg ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30.6 | 28.0 | 14.2 | 15.0 | 29.2 | 15.7 | 28.9 | 15.4 | 16.6 | 24.7 | 34.5 | 30.8 | 29.6 | 31.1 | 32.2 | 25.8 | 23.2 | 15.7 | 29.1 | 27.8 | 37.5 | 48.3 | 22.6 | 26.8 |
| 2 | 50.9 | 34.0 | 19.9 | 28.7 | 24.6 | 23.0 | 41.5 | 23.2 | 15.3 | 28.1 | 31.3 | 32.3 | 33.0 | 29.2 | 26.2 | 31.2 | 25.2 | 22.9 | 17.9 | 16.0 | 13.7 | 15.8 | 14.4 | 19.4 |
| 3 | 19.2 | 14.7 | 27.4 | 12.7 | 14.9 | 15.7 | 12.4 | 15.2 | 24.0 | 18.7 | 28.1 | 30.2 | 24.3 | 24.7 | 27.1 | 23.1 | 26.5 | 32.0 | 17.2 | 15.5 | 16.9 | 17.1 | 15.3 | 15.9 |
| 4 | 16.0 | 14.7 | 15.2 | 13.5 | 15.8 | 15.0 | 14.6 | 15.9 | 18.2 | 18.2 | 21.5 | 33.0 | 31.1 | 30.7 | 33.4 | 31.8 | 30.3 | 23.4 | 20.4 | 22.3 | 20.8 | 14.8 | 14.4 | 16.6 |
| 5 | 15.4 | 14.8 | 14.7 | 13.9 | 13.8 | 15.4 | 15.5 | 15.7 | 17.9 | 18.5 | 24.7 | 31.4 | 32.2 | 32.3 | 32.4 | 27.3 | 21.6 | 15.7 | 14.8 | 16.0 | 16.4 | 17.1 | 18.8 | 17.4 |
| 6 | 15.3 | 15.0 | 14.6 | 15.8 | 12.7 | 15.0 | 13.6 | 14.3 | 21.2 | 31.7 | 34.2 | 28.1 | 25.3 | 27.3 | 25.9 | 22.9 | 22.4 | 28.4 | 25.6 | 14.4 | 21.6 | 13.6 | 17.6 | 16.0 |
| 7 | 15.0 | 21.5 | 14.7 | 11.1 | 16.4 | 10.4 | 11.0 | 13.1 | 23.5 | 32.5 | 44.3 | 34.0 | 24.8 | 22.9 | 28.4 | 23.1 | 21.2 | 24.6 | 21.5 | 20.3 | 29.0 | 26.9 | 27.1 | 44.3 |
| 8 | 32.4 | 15.7 | 16.4 | 22.6 | 16.4 | 70.9 | 48.9 | 18.7 | 17.0 | 18.5 | 23.6 | 30.2 | 34.4 | 30.0 | 29.0 | 27.9 | 18.0 | 26.0 | 31.8 | 25.7 | 27.4 | 27.6 | 27.6 | 26.5 |
| 9 | 23.8 | 20.1 | 25.6 | 28.4 | 32.5 | 26.8 | 23.7 | 20.3 | 22.6 | 22.6 | 24.8 | 22.4 | 24.6 | 22.3 | 20.8 | 21.9 | 22.0 | 20.5 | 20.3 | 22.9 | 20.2 | 19.2 | 20.7 | 21.8 |
| 10 | 21.8 | 24.1 | 31.2 | 29.5 | 21.3 | 24.6 | 26.8 | 19.8 | 24.1 | 30.3 | 26.4 | 24.5 | 21.9 | 23.7 | 22.7 | 23.1 | 27.1 | 30.1 | 28.1 | 30.6 | 26.9 | 22.5 | 29.5 | 25.8 |
| 11 | 25.3 | 24.3 | 29.3 | 24.3 | 17.9 | 15.7 | 15.7 | 15.9 | 17.2 | 27.5 | 32.4 | 31.1 | 21.2 | 25.8 | 28.2 | 25.8 | 21.4 | 22.9 | 30.3 | 29.2 | 30.2 | 30.0 | 22.7 | 40.5 |
| 12 | 30.9 | 30.1 | 24.2 | 31.9 | 30.2 | 27.1 | 21.8 | 25.9 | 22.7 | 32.6 | 26.8 | 31.9 | 23.0 | 25.2 | 29.2 | 29.1 | 30.6 | 30.9 | 45.0 | 33.3 | 21.6 | 21.5 | 24.1 | 22.7 |
| 13 | 23.8 | 20.7 | 28.4 | 23.1 | 20.7 | 24.3 | 20.3 | 21.6 | 28.9 | 22.9 | 23.0 | 21.4 | 24.5 | 21.2 | 21.2 | 24.9 | 21.8 | 21.5 | 32.4 | 22.6 | 32.3 | 28.5 | 24.5 | 22.4 |
| 14 | 26.7 | 31.4 | 24.2 | 23.8 | 30.0 | 35.6 | 35.6 | 25.3 | 21.0 | 20.8 | 19.0 | 22.0 | 19.4 | 20.4 | 21.3 | 19.3 | 21.2 | 21.5 | 26.9 | 26.0 | 22.1 | 14.4 | 34.6 | 20.7 |
| 15 | 14.2 | 34.6 | 17.9 | 13.9 | 18.3 | 28.9 | 18.3 | 18.7 | 46.7 | 20.5 | 38.4 | 26.8 | 37.7 | 38.3 | 33.6 | 40.5 | 48.9 | 46.2 | 17.6 | 15.8 | 38.8 | 14.2 | 32.6 | 58.7 |
| 16 | 54.8 | 49.2 | 42.2 | 70.6 | 35.1 | 48.8 | 46.3 | 69.0 | 55.1 | 39.6 | 39.0 | 25.3 | 20.3 | 23.3 | 25.0 | 28.9 | 21.2 | 23.6 | 22.2 | 21.1 | 24.6 | 23.6 | 27.4 | 36.5 |
| 17 | 58.5 | 24.1 | 28.8 | 28.4 | 39.9 | 34.4 | 34.9 | 36.5 | 29.5 | 34.2 | 39.4 | 25.2 | 35.3 | 32.2 | 30.1 | 25.9 | 29.0 | 31.2 | 21.9 | 23.6 | 32.2 | 27.3 | 26.7 | 30.0 |
| 18 | 23.0 | 15.7 | 17.9 | 23.5 | 28.1 | 17.5 | 18.8 | 15.9 | 15.8 | 15.8 | 15.9 | 25.2 | 31.1 | 27.9 | 28.7 | 28.9 | 25.0 | 28.9 | 23.3 | 18.5 | 15.6 | 14.7 | 13.3 | 14.3 |
| 19 | 14.6 | 14.7 | 15.6 | 14.7 | 17.4 | 16.7 | 15.7 | 13.4 | 19.7 | 18.0 | 18.9 | 19.2 | 18.0 | 20.6 | 29.2 | 27.6 | 18.8 | 29.6 | 31.1 | 25.5 | 16.4 | 15.0 | 15.4 | 15.7 |
| 20 | 18.9 | 15.7 | 16.1 | 16.8 | 14.0 | 15.4 | 14.2 | 16.1 | 16.4 | 29.9 | 17.9 | 32.8 | 37.0 | 27.9 | 27.9 | 24.5 | 21.0 | 36.4 | 16.9 | 18.3 | 16.2 | 20.6 | 26.6 | 19.2 |
| 21 | 14.1 | 26.1 | 23.6 | 15.3 | 16.1 | 40.9 | 42.7 | 32.1 | 49.1 | 41.6 | 66.9 | 25.6 | 24.1 | 21.1 | 20.3 | 29.0 | 34.3 | 49.0 | 19.0 | 61.1 | 55.0 | 50.2 | 28.7 | 34.3 |
| 22 | 42.5 | 41.8 | 47.9 | 34.2 | 33.1 | 17.0 | 44.7 | 25.0 | 43.8 | 22.1 | 22.9 | 29.2 | 34.5 | 30.6 | 34.5 | 44.5 | 39.6 | 37.2 | 38.5 | 35.0 | 49.5 | 24.0 | 18.3 | 21.0 |
| 23 | 32.3 | 30.4 | 33.9 | 33.3 | 31.7 | 44.2 | 41.5 | 36.9 | 38.0 | 43.4 | 35.4 | 41.4 | 41.3 | 39.8 | 44.5 | 44.5 | 43.0 | 34.9 | 39.9 | 36.0 | 44.7 | 42.5 | 30.6 | 34.9 |
| 24 | 41.6 | 40.2 | 61.1 | 59.3 | 47.2 | 26.8 | 34.1 | 36.7 | 45.0 | 42.9 | 41.6 | 47.7 | 42.4 | 43.2 | 46.8 | 44.8 | 40.4 | 36.7 | 40.0 | 43.9 | 40.7 | 37.4 | 32.8 | 31.5 |
| 25 | 37.8 | 32.9 | 33.5 | 15.3 | 24.0 | 34.8 | 23.8 | 30.0 | 33.3 | 28.7 | 49.6 | 42.6 | 39.3 | 39.7 | 37.9 | 36.1 | 33.6 | 22.6 | 52.8 | 28.0 | 31.2 | 27.1 | 31.1 | 31.8 |
| 26 | 30.6 | 27.0 | 18.2 | 16.9 | 14.7 | 13.9 | 15.2 | 13.3 | 18.6 | 31.1 | 40.2 | 40.5 | 40.4 | 41.2 | 32.4 | 42.2 | 39.3 | 57.3 | 14.7 | 12.1 | 14.1 | 13.2 | 12.2 | 11.7 |
| 27 | 10.4 | 8.6 | 11.5 | 15.2 | 11.0 | 14.3 | 16.4 | 42.3 | 40.1 | 39.1 | 40.6 | 42.4 | 42.4 | 39.3 | 36.3 | 32.4 | 34.2 | 32.8 | 34.1 | 31.8 | 53.1 | 16.5 | 16.3 | 31.9 |
| 28 | 13.6 | 13.8 | 15.0 | 11.2 | 12.5 | 13.9 | 12.8 | 12.4 | 15.8 | 30.1 | 36.6 | 30.6 | 24.9 | 26.3 | 24.9 | 23.8 | 23.4 | 24.9 | 14.3 | 12.7 | 10.6 | 8.7 | 9.3 | 12.6 |
| 29 | 17.0 | 15.4 | 22.6 | 15.3 | 15.0 | 32.9 | 15.8 | 19.0 | 28.1 | 30.1 | 33.7 | 31.4 | 29.1 | 33.4 | 32.6 | 29.5 | 34.8 | 19.7 | 23.8 | 16.9 | 14.3 | 15.5 | 16.3 | 14.6 |
| 30 | 13.9 | 13.8 | 13.6 | 11.9 | 11.5 | 11.6 | 11.6 | 13.2 | 16.6 | 30.7 | 45.5 | 55.3 | 40.0 | 25.8 | 23.5 | 25.7 | 29.5 | 23.6 | 20.5 | 20.7 | 16.3 | 12.0 | 13.7 | 13.2 |
| 31 | 9.8 | 10.8 | 10.8 | 12.4 | 16.3 | 20.1 | 17.4 | 38.9 | 15.8 | 24.2 | 34.5 | 30.9 | 34.2 | 29.2 | 27.5 | 23.6 | 20.1 | 19.8 | 16.9 | 15.8 | 16.5 | 17.7 | 14.3 | 17.7 |

Table 3-25. Sigma Theta Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET VWS (MPH ) DATA FOR: DEC 1990

HOURS (HST)

| HR-END DAY | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.0 | 0.1 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 |
| 2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 |
| 3 | 0.0 | 0.1 | 0.0 | 0.1 | -0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| 4 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.0 | 0.0 | -0.1 | -0.1 | 0.0 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.0 |
| 5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.3 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| 6 | -0.1 | -0.1 | -0.1 | -0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | -0.1 | 0.1 | 0.0 | 0.0 | -0.1 | -0.2 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 |
| 7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | 0.1 | -0.2 | -0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.1 |
| 8 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | -0.1 | 0.1 | 0.0 |
| 9 | 0.0 | -0.3 | 0.0 | 0.0 | -0.1 | 0.1 | -0.1 | -0.3 | 0.0 | -0.2 | -0.1 | -0.3 | -0.2 | -0.2 | -0.3 | -0.4 | 0.0 | 0.0 | 0.0 | -0.1 | -0.2 | 0.0 | 0.0 | 0.0 |
| 10 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | -0.1 | -0.2 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| 11 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 | 0.1 | -0.3 | 0.1 | -0.3 | -0.1 | -0.2 | -0.1 | 0.0 | 0.0 | 0.1 | -0.1 | 0.0 | -0.1 | 0.0 | 0.1 |
| 12 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.0 | 0.0 | 0.0 | -0.1 | -0.2 | 0.0 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | -0.3 | -0.2 |
| 13 | -0.2 | -0.4 | -0.2 | -0.4 | -0.2 | -0.2 | -0.2 | 0.0 | -0.1 | 0.0 | 0.1 | -0.1 | -0.1 | -0.3 | -0.2 | -0.2 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | -0.1 | -0.2 |
| 14 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | -0.2 | -0.1 | 0.0 | -0.1 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | 0.1 | -0.1 | 0.1 | 0.1 | 0.0 | 0.1 |
| 15 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.0 | 0.1 | 0.0 | 0.1 | 0.2 | 0.0 | -0.1 | -0.1 | 0.0 | 0.0 | 0.1 | -0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | -0.1 | 0.0 |
| 16 | 0.1 | 0.1 | -0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.2 | -0.1 | -0.3 | -0.1 | -0.3 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | 0.0 | -0.1 | 0.1 |
| 17 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | -0.1 | -0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | -0.2 | 0.0 | -0.1 | -0.2 | -0.1 | 0.1 | 0.0 | -0.1 | 0.1 |
| 18 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | -0.1 | 0.2 | -0.1 | -0.4 | -0.2 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 |
| 19 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | -0.1 | 0.1 | -0.1 | 0.1 | 0.0 | -0.2 | -0.2 | 0.2 | -0.1 | 0.0 | 0.0 | -0.1 |
| 20 | 0.1 | 0.0 | 0.1 | 0.0 | 0.3 | 0.2 | 0.2 | 0.3 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | -0.2 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 |
| 21 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 | -0.1 | -0.3 | -0.2 | -0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | -0.1 |
| 22 | 0.4 | 0.4 | 0.1 | 0.3 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.1 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 | 0.1 | 0.3 | 0.1 | 0.1 |
| 23 | 0.2 | 0.2 | 0.3 | 0.2 | 0.2 | 0.5 | 0.3 | 0.5 | 0.6 | 0.4 | 0.7 | 0.6 | 0.5 | 0.7 | 0.5 | 0.8 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.2 | 0.1 |
| 24 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.5 | 0.4 | 0.6 | 0.6 | 0.6 | 0.7 | 0.5 | 0.5 | 0.7 | 1.0 | 0.9 | 0.7 | 0.7 | 0.7 | 0.8 | 0.6 | 0.5 |
| 25 | 0.4 | 0.4 | 0.3 | 0.1 | 0.1 | 0.1 | 0.1 | 0.3 | 0.4 | 0.3 | 0.0 | 0.5 | 0.6 | 0.7 | 0.7 | 0.7 | 0.6 | 0.5 | 0.1 | 0.2 | 0.3 | 0.3 | 0.4 | 0.4 |
| 26 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.2 | 0.2 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.8 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 |
| 27 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.3 | 0.4 | 0.4 | 0.3 | 0.4 | 0.7 | 0.5 | 0.4 | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 |
| 28 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | -0.1 | 0.0 | -0.1 | -0.2 | -0.1 | -0.2 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 29 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | -0.3 | -0.2 | -0.2 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 30 | 0.0 | 0.1 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | -0.1 | 0.1 | 0.0 | 0.0 | 0.0 | -0.1 | -0.1 | -0.2 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 31 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.3 | -0.1 | -0.2 | -0.2 | -0.2 | -0.2 | -0.1 | -0.3 | -0.2 |

Table 3-26. Vertical Wind Speed Monthly Summary Site 2

MONTHLY SUMMARY REPORT

LOCATION: SITE 2, MET — TRUE GEOTHERMAL SIG W (DEG ) — DATA FOR: DEC 1990

| HR-END DAY | HOURS (HST) 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | 0.4 | 0.3 | 0.4 | 0.3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.6 | 0.5 | 0.5 | 0.3 | 0.3 | 0.4 | 0.4 | 0.2 | 0.2 | 0.1 |
| 2 | 0.1 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.3 | 0.4 | 0.4 | 0.5 | 0.4 | 0.5 | 0.5 | 0.6 | 0.5 | 0.4 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 |
| 3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.4 | 0.3 | 0.5 | 0.5 | 0.6 | 0.8 | 0.7 | 0.8 | 0.8 | 0.7 | 0.5 | 0.5 | 0.3 | 0.4 | 0.4 | 0.3 | 0.3 | 0.4 |
| 4 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.6 | 0.5 | 0.6 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.8 | 0.7 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.5 |
| 5 | 0.4 | 0.4 | 0.5 | 0.4 | 0.4 | 0.5 | 0.6 | 0.4 | 0.6 | 0.7 | 0.8 | 1.0 | 1.0 | 1.1 | 1.1 | 0.9 | 0.7 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | 0.3 |
| 6 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.1 | 0.1 | 0.4 | 0.5 | 0.5 | 0.5 | 0.6 | 0.5 | 0.6 | 0.5 | 0.5 | 0.3 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 |
| 7 | 0.1 | 0.1 | 0.2 | 0.1 | 0.0 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.6 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.3 | 0.4 | 0.3 | 0.3 | 0.3 |
| 8 | 0.2 | 0.1 | 0.2 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.5 | 0.6 | 0.8 | 0.8 | 1.0 | 0.9 | 0.8 | 0.6 | 0.8 | 1.0 | 0.9 | 0.9 | 0.8 | 0.8 | 0.8 |
| 9 | 0.8 | 0.6 | 0.6 | 0.6 | 0.8 | 0.9 | 0.8 | 1.0 | 0.9 | 1.0 | 1.0 | 1.0 | 0.8 | 0.9 | 0.9 | 0.8 | 0.7 | 0.6 | 0.8 | 0.8 | 0.7 | 0.6 | 0.7 | 0.7 |
| 10 | 0.6 | 0.7 | 0.9 | 0.6 | 0.5 | 0.4 | 0.4 | 0.5 | 0.5 | 0.7 | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 | 1.0 | 0.7 | 0.5 | 0.4 | 0.5 | 0.4 | 0.3 | 0.4 | 0.3 |
| 11 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.4 | 0.3 | 0.5 | 0.7 | 0.7 | 0.8 | 0.6 | 0.7 | 0.5 | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 | 0.3 | 0.5 | 0.4 | 0.4 |
| 12 | 0.3 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.5 | 0.6 | 0.5 | 0.4 | 0.6 | 0.5 | 0.7 | 0.6 | 0.6 | 0.7 |
| 13 | 0.6 | 0.5 | 0.5 | 0.5 | 0.8 | 0.6 | 0.6 | 0.5 | 0.6 | 0.6 | 0.6 | 0.6 | 0.8 | 0.8 | 0.7 | 0.6 | 0.7 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.5 | 0.6 |
| 14 | 0.6 | 0.5 | 0.4 | 0.5 | 0.6 | 0.5 | 0.4 | 0.5 | 0.6 | 0.5 | 0.4 | 0.5 | 0.7 | 0.6 | 0.5 | 0.4 | 0.5 | 0.3 | 0.3 | 0.4 | 0.1 | 0.2 | 0.2 | 0.2 |
| 15 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.5 | 0.4 | 0.3 | 0.4 | 0.0 | 0.1 | 0.1 | 0.2 | 0.3 | 0.3 |
| 16 | 0.4 | 0.4 | 0.5 | 0.3 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.2 | 0.6 | 0.6 | 1.3 | 1.4 | 1.1 | 1.5 | 1.0 | 0.7 | 0.8 | 0.4 | 0.8 | 0.6 | 0.7 | 0.9 |
| 17 | 1.6 | 0.9 | 1.1 | 1.1 | 0.8 | 1.0 | 0.9 | 0.8 | 1.1 | 0.9 | 1.2 | 1.3 | 1.5 | 1.5 | 1.6 | 1.0 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.5 | 0.6 | 0.4 |
| 18 | 0.6 | 0.4 | 0.5 | 0.3 | 0.6 | 0.7 | 0.7 | 0.9 | 1.0 | 0.9 | 1.0 | 1.4 | 1.9 | 1.4 | 1.6 | 1.9 | 2.6 | 2.7 | 2.3 | 1.7 | 1.4 | 0.9 | 0.8 | 1.1 |
| 19 | 1.1 | 1.1 | 1.0 | 1.1 | 1.2 | 1.1 | 1.0 | 0.9 | 1.2 | 1.6 | 1.7 | 1.5 | 1.6 | 1.6 | 1.5 | 1.7 | 1.9 | 1.8 | 2.6 | 2.5 | 1.6 | 1.5 | 1.2 | 1.0 |
| 20 | 0.9 | 0.9 | 0.8 | 1.0 | 1.2 | 0.8 | 1.1 | 1.3 | 1.2 | 0.9 | 0.9 | 0.9 | 1.0 | 1.2 | 1.2 | 0.8 | 0.7 | 1.0 | 0.7 | 1.0 | 0.7 | 0.9 | 0.7 | 0.7 |
| 21 | 0.7 | 0.9 | 0.6 | 0.6 | 0.6 | 0.5 | 1.0 | 0.9 | 1.0 | 0.7 | 0.7 | 1.1 | 1.4 | 1.5 | 1.2 | 0.6 | 0.2 | 0.9 | 0.5 | 0.7 | 0.6 | 1.2 | 1.2 | 1.3 |
| 22 | 1.7 | 1.9 | 0.9 | 1.0 | 0.7 | 0.8 | 0.6 | 0.9 | 0.6 | 0.7 | 0.8 | 1.1 | 1.2 | 1.5 | 1.6 | 2.5 | 2.0 | 1.9 | 1.6 | 1.9 | 0.9 | 1.2 | 0.5 | 0.6 |
| 23 | 0.7 | 1.2 | 1.4 | 1.3 | 1.0 | 2.1 | 1.9 | 2.4 | 2.4 | 2.4 | 2.6 | 2.7 | 2.9 | 3.0 | 3.4 | 3.2 | 2.6 | 2.0 | 2.2 | 1.6 | 1.9 | 1.6 | 0.8 | 0.6 |
| 24 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.5 | 0.7 | 1.0 | 1.4 | 1.4 | 1.5 | 1.3 | 1.6 | 1.4 | 1.4 | 1.6 | 1.8 | 1.4 | 1.4 | 1.5 | 1.4 | 1.3 | 0.9 | 0.9 |
| 25 | 0.7 | 0.8 | 0.4 | 0.3 | 0.4 | 0.1 | 0.1 | 0.5 | 0.6 | 0.7 | 0.3 | 0.9 | 1.1 | 1.2 | 1.3 | 1.3 | 1.0 | 0.8 | 0.5 | 0.6 | 0.6 | 0.7 | 0.9 | 0.9 |
| 26 | 0.8 | 0.3 | 0.1 | 0.1 | 0.1 | 0.2 | 0.4 | 0.3 | 0.3 | 0.8 | 1.0 | 1.2 | 1.3 | 1.3 | 1.2 | 0.8 | 0.3 | 0.0 | 0.1 | 0.2 | 0.1 | 0.2 | 0.1 | 0.2 |
| 27 | 0.0 | 0.0 | 0.1 | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.2 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 | 1.1 | 0.9 | 0.9 | 0.6 | 0.3 | 0.4 | 0.2 | 0.2 | 0.3 | 0.1 |
| 28 | 0.1 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.4 | 0.6 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 | 0.2 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| 29 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.3 | 0.7 | 0.7 | 0.7 | 0.8 | 0.8 | 0.9 | 0.7 | 0.7 | 0.4 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.3 |
| 30 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.3 | 0.4 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| 31 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | 0.1 | 0.1 | 0.1 | 0.4 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 | 0.9 | 0.7 | 0.7 | 0.8 | 0.6 | 0.5 | 0.6 | 0.7 | 0.6 | 0.7 |

Table 3-27. Sigma W Monthly Summary Site 2

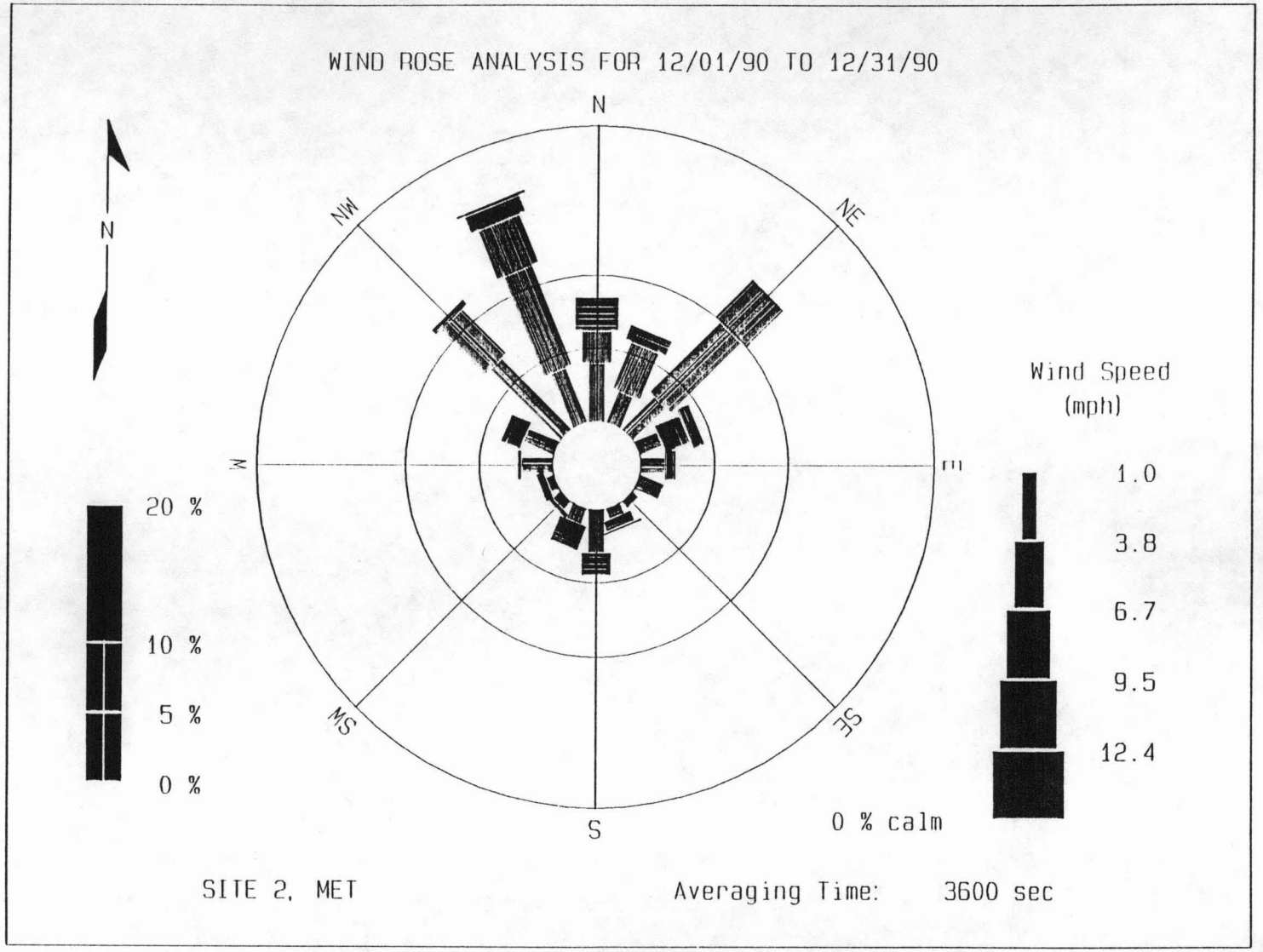


Figure 3-2. Wind Rose Analysis Site 2

WD (DEG) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 360. | 12/03/90 | 10:00:00 |
| Second Highest: | 360. | 12/31/90 | 11:00:00 |
| Lowest Value: | 0. | 12/13/90 | 20:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 203. | 10.000 Percentile: | 30. |
| Standard Deviation: | 126. | 20.000 Percentile: | 48. |
| | | 30.000 Percentile: | 84. |
| Geometric Mean: | 134. | 40.000 Percentile: | 177. |
| Standard Deviation: | 3. | 50.000 Percentile: | 236. |
| | | 60.000 Percentile: | 292. |
| Valid Data: | 744 | 70.000 Percentile: | 314. |
| Invalid Data: | 0 | 80.000 Percentile: | 331. |
| Missing Data: | 0 | 90.000 Percentile: | 342. |
| Data Recovery: | 100.00% | 100.000 Percentile: | 360. |

SITE 2, MET Averaging Time: 3600 sec

Table 3-28. Wind Direction Summary Statistics Site 2

WS (MPH) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 12.4 | 12/31/90 | 23:00:00 |
| Second Highest: | 11.1 | 12/31/90 | 22:00:00 |
| Lowest Value: | 0.0 | 12/06/90 | 06:00:00 |

| | | | |
|---|---|---|---|
| Arithmetic Mean: | 3.6 | 10.000 Percentile: | 0.4 |
| Standard Deviation: | 2.5 | 20.000 Percentile: | 1.0 |
| | | 30.000 Percentile: | 2.0 |
| Geometric Mean: | 2.4 | 40.000 Percentile: | 2.8 |
| Standard Deviation: | 3.3 | 50.000 Percentile: | 3.5 |
| | | 60.000 Percentile: | 4.2 |
| Valid Data: | 744 | 70.000 Percentile: | 5.0 |
| Invalid Data: | 0 | 80.000 Percentile: | 5.9 |
| Missing Data: | 0 | 90.000 Percentile: | 7.0 |
| Data Recovery: | 100.00% | 100.000 Percentile: | 12.4 |

SITE 2, MET Averaging Time: 3600 sec

Table 3-29. Wind Speed Summary Statistics Site 2

Sigé1 (deg) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 70.9 | 12/08/90 | 05:00:00 |
| Second Highest: | 70.6 | 12/16/90 | 03:00:00 |
| Lowest Value: | 8.6 | 12/27/90 | 01:00:00 |
| Arithmetic Mean: | 26.2 | | |
| Standard Deviation: | 10.5 | | |
| Geometric Mean: | 24.3 | | |
| Standard Deviation: | 1.5 | | |
| Valid Data: | 744 | | |
| Invalid Data: | 0 | | |
| Missing Data: | 0 | | |
| Data Recovery: | 100.00% | | |

| | |
|---|---|
| 10.000 Percentile: | 14.6 |
| 20.000 Percentile: | 16.1 |
| 30.000 Percentile: | 19.2 |
| 40.000 Percentile: | 22.4 |
| 50.000 Percentile: | 24.6 |
| 60.000 Percentile: | 27.6 |
| 70.000 Percentile: | 30.6 |
| 80.000 Percentile: | 33.9 |
| 90.000 Percentile: | 40.5 |
| 100.000 Percentile: | 70.9 |

SITE 2, MET Averaging Time: 3600 sec

Table 3-30. Sigma Theta Summary Statistics Site 2

VWS (MPH) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | |
|---|---|---|---|
| Highest Value: | 1.0 | 12/24/90 | 16:00:00 |
| Second Highest: | 0.9 | 12/24/90 | 17:00:00 |
| Lowest Value: | -0.4 | 12/09/90 | 15:00:00 |
| Arithmetic Mean: | 0.1 | | |
| Standard Deviation: | 0.2 | | |
| Geometric Mean: | 0.0 | | |
| Standard Deviation: | 1.0 | | |
| Valid Data: | 744 | | |
| Invalid Data: | 0 | | |
| Missing Data: | 0 | | |
| Data Recovery: | 100.00% | | |

| | |
|---|---|
| 10.000 Percentile: | -0.1 |
| 20.000 Percentile: | 0.0 |
| 30.000 Percentile: | 0.0 |
| 40.000 Percentile: | 0.0 |
| 50.000 Percentile: | 0.0 |
| 60.000 Percentile: | 0.1 |
| 70.000 Percentile: | 0.1 |
| 80.000 Percentile: | 0.1 |
| 90.000 Percentile: | 0.3 |
| 100.000 Percentile: | 1.0 |

SITE 2, MET Averaging Time: 3600 sec

Table 3-31. Vertical Wind Speed Summary Statistics Site 2

SIG W (DEG) SUMMARY STATISTICS FOR 12/01/90 - 12/31/90

| | | | | | |
|---|---|---|---|---|---|
| Highest Value: | 3.400 | 12/23/90 | 14:00:00 | | |
| Second Highest: | 3.200 | 12/23/90 | 15:00:00 | | |
| Lowest Value: | 0.020 | 12/15/90 | 18:00:00 | | |
| Arithmetic Mean: | 0.668 | | 10.000 | Percentile: | 0.158 |
| Standard Deviation: | 0.508 | | 20.000 | Percentile: | 0.277 |
| | | | 30.000 | Percentile: | 0.356 |
| Geometric Mean: | 0.000 | | 40.000 | Percentile: | 0.454 |
| Standard Deviation: | 1.000 | | 50.000 | Percentile: | 0.553 |
| | | | 60.000 | Percentile: | 0.672 |
| Valid Data: | 744 | | 70.000 | Percentile: | 0.800 |
| Invalid Data: | 0 | | 80.000 | Percentile: | 0.928 |
| Missing Data: | 0 | | 90.000 | Percentile: | 1.300 |
| Data Recovery: | 100.00% | | 100.000 | Percentile: | 3.400 |

SITE 2, MET Averaging Time: 3600 sec

Table 3-32. Sigma W Summary Statistics Site 2

MEASUREMENT TECHNOLOGIES

141 Suburban Rd., Suite D-1
San Luis Obispo, CA 93401
(805) 549-0595 FAX (805) 549-0398